PHILADELPHIA, MARCH 19, 1887.

ORIGINAL LECTURES.

CLINICAL LECTURE ON THE TREATMENT OF SYPHILIS.

Delivered at the Hôpital de la Pitié, Paris,

BY PROFESSOR VERNEUIL.

(Translated for the MEDICAL TIMES from advance sheets.)

IN 1867 I read a communication before the Société de Chirurgie in which I opposed the views of the partisans of the expectant treatment of syphilis. I held at that time that this affection should be treated as soon as the diagnosis was made out, or just as quickly as the primitive or secondary manifestations were perceived; and I also stated that I could not see any advantage in waiting. It is impossible to judge beforehand if the virus is going to develop in a weak, medium, or strong form, or if it will be transient or tenacious. I therefore commence the general treatment as soon as possible, making every effort to prevent tertiary syphilis. It is true that I am never sure that I have attained this end, for tertiary accidents are happily rare, and one can never tell if they will show themselves or not. But, without having the actual proof, I believe in the efficacy of preventive treatment by mercury in all these cases.

If I cannot support my statements with exact statistics,—which is difficult to do in any disease,—my experience is sufficient to enable me to express at least a most profound conviction that the full mercurial course is the best preventive of tertiary syphilis.

Expectation is useful for only one thing: that is, to show to the physician the natural evolution of this disease and its degree of gravity; but, on the other hand, it is open to the objection of losing precious time, during which the virus settles deeply into the economy and profoundly changes the anatomical elements and the fluids. The expectant doctrine leads its adherents at best, if not to desire, at least not to be afraid of, tertiary accidents, because after them, they think, a certain cure may still occur. This, I am sure, is an important error, against which we cannot protest too strongly. These tertiary forms, I believe, are often very grave; so serious that they usually indicate a profound and inveterate intoxication. That the iodide of potassium modifies them very often I am willing to admit; but it does not do so always. It is sometimes entirely impotent, and is useless to prevent relapses. Then, even when it does act, it does not always remove the ravages of syphilis. Here I would cite particularly those cases in which ulcerated gummata have produced, in the process of healing, contractions, perforations, atrophies, anchyloses, deforming scars, etc. Once formed, all these various lesions are permanent and incurable, or at least necessitate plastic operations, the resulting success of which is very uncertain.

Potassium iodide, then, does not always succeed in curing the tertiary manifestations of syphilis. Sometimes it will not act at all, and at other times it will not be well tolerated. In some we can get only a passing amelioration, and these cases are at least as large in number as those in which it gives cures which seem to be durable. All authors give cases in which the iodide of potassium succeeded only after the temporary administration of mercury. For my own part, I have frequently remarked that herpetic patients are unfavorably affected by the iodide.

The treatment of syphilis must be long and patiently followed, because it is a disease of long duration. Its cure takes about two years. I do not wish to be understood as saying by this that the treatment must be given constantly and without interruption during two consecutive years. It should at first be rigorously followed for about four months; it may then be suspended during a month, and again taken up for periods of three or four weeks, with interruptions of about the same period.

Syphilis, without doubt, may be cured spontaneously, but the cases seem rare, and certainly cannot be foretold. Even if the treatment is useless, it does not seem to have any serious inconveniences. Uncertainty reigns here, as it does in the whole therapeutic field; but so long as we do no harm we may act without any scruple.

Mercury remains the most powerful modifier of syphilis in its first periods. If its direct action on the virus has not been proved, it is nevertheless demonstrated

that it modifies advantageously the isolated and successive manifestations of this general disease. Being at least as efficacious as any other remedy in a case of medium intensity, it is indispensable and could not be replaced in serious and tenacious syphilides, in visceral syphilis, in that of pregnant women, and also in that of new-born children.

A woman who is suffering with syphilis rarely carries to term the product of conception. Sooner or later she aborts, or else brings into the world poor, little, miserable beings that are hardly viable. This will be continued for several years in succession unless a proper mercurial treatment be given to remove the constant cause of the miscarriages. More than one union has become fertile only after the administration of mercury to one of the parties, if not to both. These facts are well established, and it is a great error to forget them.

What other form of medication have we to combat the syphilis of the newly-born? What success can we hope for from the expectant plan? And how many of these unhappy little ones can we save by topical and other trivial medication? Let us read over again the history of those epidemics of syphilis of former centuries, or even in our own times, and see how quickly their ravages were and are arrested by the intervention of mercury!

A mercurial treatment well directed, with the help of auxiliary means taken from hygiene, regimen, and the class of tonics, is, in the majority of cases, entirely harmless. It is important, therefore, to remove the prejudice in regard to it in the minds of the public. It is rare that we cannot succeed in having mercury tolerated, thanks to the resources of modern medicine. Syphilis and mercury are both accused—and with reason—of producing poverty of blood or a sort of artificial chlorosis. This double syphilitic and mercurial anæmia is to be combated by tonics, such as iron, cinchona, good food, etc., and this should be done as a preventive, and used before the impoverishment of the blood is established. Intestinal disorders are prevented by opium and its congeners, and hydrotherapy may be prescribed, with salt-water baths or sulphur waters.

Salivation is almost impossible if the mouth is the object of careful attention by constant gargling with solutions of the chlorate of potash, and if the gums are painted from time to time with tincture of iodine.

If the usual way of administration causes intolerance, we can use mercurial inunctions. In one word, exercise therapeutic and medical art. I closed my communication to the Society, in 1867, in these words: "*The problem of the cure of syphilis without mercury is not yet solved, and nothing indicates that it will be very soon.*" I have just read over these pages, and in truth I find but little to add to what I wrote twenty years ago. Certainly even then they were not novel; but at least my words opposed precise affirmations to vague assertions, obsolete theories, and questionable principles of practice.

I might dispense with the necessity of recalling them at this date if some eccentric persons from time to time did not enter the field against mercury, and especially to accord to nature a curative power which unhappily it does not possess. But the arguments of 1867 serve to answer them just as well in 1887, and also in 1907 if they still repeat their errors. In the paper spoken of I touched upon only a small number of points in the treatment of syphilis, and if you wish to know what I think of some other questions of practice after having treated syphilis for forty years, I can formulate some propositions for you:

(*a*) In cases where the diagnosis is difficult, I never rely solely on the indications given by the iodide of potassium, but always try mercury. I have observed, at least three times, tumors of the testicle which resisted strong doses of the iodide, and in which castration seemed consequently inevitable, when, to calm my conscience, I gave mercury, which brought about a cure in a few weeks.

(*b*) I scarcely ever give iodide of potassium in large doses; two or three grammes a day are my maximum, except in a few cases of rapid evolution, such as in gumma of the nose, of the palatine arch, or the soft palate and the pharynx, where it is important to stop its ravages quickly. Here it is necessary to give as much as five to six grammes a day; but as soon as it yields I always return to the smaller doses. Onychia also requires large doses; why, I do not know.

(*c*) I am not at all a partisan of the

association of mercury and the iodide of potassium. In ordinary cases of secondary syphilis I much prefer to give the mercury alone or associated with tonics and good alimentation. However, I use the mixed treatment very willingly for the late secondary or tertiary manifestations when mercury has not been given or when it has been insufficiently administered. In such a case I prescribe simply the protiodide of mercury in doses of five centigrammes, and the iodide of potassium with it to the amount of one gramme a day. The *sirop de Gibert* is a good preparation, but it is sometimes badly tolerated. I have seen baths of corrosive sublimate perform miracles in extensive ulcerated syphilides.

(*d*) I have rarely had recourse to mercurial frictions, of which, however, I recognize the special power in certain cases where it is necessary to act quickly and energetically. Even when I advise inunctions, I always return later to the internal administration of the protiodide or of some other preparation of mercury, in small doses which are continued for a long time.

(*e*) I have never used mercurial hypodermic injections; and I only rarely see any indication for them. I have not allowed myself to be carried away with the advantages they are said to possess of being the shortest treatment, since it is pretended that a cure is certain in fifteen, twenty, or thirty days. I think, on the contrary, that the destruction or neutralization of the syphilitic virus is better assured by a slow impregnation of the economy than by its more or less sudden saturation.

(*f*) In the local treatment of primitive ulceration and precocious secondary lesions, as well as the mucous patches, I give the preference to solutions of nitrate of silver of different strengths, and also to chloral. For late secondary and tertiary ulcerations the plaster de Vigo is the best preparation. As for the ointment of iodide of potassium which is used in hyperplasias (conjunctival, glandular, or bony), it is usually badly prepared. In the strength of four parts to thirty it inflames the skin, acts as a counter-irritant, and is not absorbed; in just half this strength, on the other hand, it is well tolerated, and penetrates much better, even to the deep structures.

ORIGINAL COMMUNICATIONS.

THE PROGRESS AND LIMITATIONS OF OPERATIONS UPON THE ABDOMINAL CAVITY.*

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THE surgeon of to-day, standing upon the borders of the abdominal cavity and peering into its recesses, is compelled, like Alexander of old, to express regret that no more organs exist within its domain which remain to be conquered by his art and be rendered subject to his knife. As he thus contemplates the fields of conquest, he is led to consider, In what manner were these grand victories achieved, —what the beginnings of this mighty invasion into this cavity, hitherto regarded as so well protected by its innermost barrier, which afforded not only protection against intrusion, but embraced within its folds the organs contained within, and still further opposed assault? what the development of the methods which have accomplished victory? and, finally, if any exist, what the limits of surgical procedures within this cavity?

To those acquainted, as no doubt you all are, with the history of the progress of surgery, it is not necessary to dwell in detail upon the beginnings of surgical operations upon the abdominal cavity. In truth, it may not be possible to fix, in accurate statement, the beginning. While it is no doubt true that unpremeditated operations, resulting in the successful extirpation of organs the seat of morbid changes, established the feasibility of the successful performance of such operations, and led to further inquiry and study of proper methods, yet I believe that in the Cæsarean section we find the first premeditated attempt—a well-defined plan of operation upon the cavity carried into execution, and having in view a definite purpose,—executed under the inspiration of the noble impulse to make an effort to rescue from impending death the life, happily it may be, of two beings.

To show the great progress which has been made in the performance of this operation through the Porro-Müller modifications, it is only necessary to refer to the

* The annual Address read before the Philadelphia Academy of Surgery, March 7, 1887.

results which have followed in each. For one hundred years, as stated by Dr. Clement Godson, every Cæsarean section was followed by death in the Vienna hospitals. From 1787 to 1879 the same results followed in the Maternité of Paris. In Italy it was the same. The table which he presented at the end of 1884 gave one hundred and fifty-two cases of Porro's operation, with sixty-six recoveries and eighty-six deaths, and was based upon information gathered from eleven different countries and ninety operators.

Premeditated operations upon the ovaries and uterine appendages in a state of disease may be regarded as next in order of execution, the discussion of the first of which by surgical writers began in the seventeenth century, so far as related to the effects to be accomplished by such operations. Fifty years later the possibility of performing the operations was admitted, and, with many qualifying conditions, the attempt was recommended. The continued discussion of the subject, with the gradual advancement in knowledge, led in 1809 to the successful practice of operations based upon correct diagnosis and intelligent methods of procedure.

The operation for the removal of the healthy ovaries of women—an operation greatly vaunted in these recent days, and performed, in my opinion, with the exhibition of much reckless ignorance and lack of judgment—has descended from the Middle Ages and even more remote periods, in which it was employed upon young girls for the purpose of preventing the propagation of hereditary diseases and deformities and for maintaining the supply of barren prostitutes.

With the brilliant results achieved in ovariotomy, as reflected in the gradual but positive reduction of the rate of mortality and the vastly improved methods of operation, you are all familiar.

Within a few years, morbid conditions of the Fallopian tubes have been classified, their pathological relations determined, their diagnostic symptoms defined, and their treatment by surgical procedures established. Enlargement of these organs may be cystic in character, forming as it were retention-cysts, containing simple fluid, blood, or menstrual fluid. The contents may be purulent in character, the result of specific or non-specific inflammatory action. Papillomatous or fibrous growths may be deposited in their walls, causing enlargement; and, finally, the products of conception may find lodgment within these cavities, producing the several varieties of tubal pregnancy. Of these various conditions involving the Fallopian tubes, the latter, tubal pregnancy, has for a long period attracted the attention and commanded the careful study of surgeons and obstetricians, with the result of establishing as the best and safest practice removal of the tube and its contents by abdominal section as soon as the condition has been determined by careful examination to exist.

The extirpation of solid growths of the tubes may be required in cases in which their large size gives rise to symptoms of pressure upon important structures.

Within a very recent period much attention has been bestowed upon the subject of the different forms of salpingitis,—inflammatory conditions of the tubes. In a recent communication upon the etiology, pathology, and classification of salpingitis, Dr. Sänger, of Leipsic, presented as the result of his investigations a very complete classification of this affection, based upon the theories of infection by micro-organisms. The study of diagnostic symptoms and of methods of physical exploration has led in many instances to recognition of these conditions, and justified the extirpation by abdominal section as a means of treatment. In this connection it is interesting to note that Sir Spencer Wells states, in his work issued in 1885, that he had up to that time met with but four examples in which the disease of the Fallopian tubes was sufficient to justify their removal; and, moreover, "that he had never seen anything supporting the opinion that disease of the Fallopian tubes occurs with anything approaching the extraordinary frequency with which, by some, it is alleged to occur."

Tumors of the round ligaments, fibroid in character, have been in a few instances diagnosticated and submitted to successful treatment by laparotomy.

Up to a period of twenty years ago, operations for the removal of fibroid tumors of the uterus were rarely designedly performed. As a rule, the surgeon was confronted with these growths as the result of a mistaken diagnosis, and the operation was more frequently abandoned than completed. Such operations, however,

gave knowledge and encouraged premeditated efforts, until they have become in a measure established as a justifiable surgical procedure. Unfortunately, so great has been the mortality that, at this time, some hesitation exists in the minds of surgeons with regard to its performance except in the most favorable cases.

Without doubt, many patients, the subjects of uterine myomata, are permitted to drag out a weary existence of discomfort and suffering for want of surgical interference. On the other hand, some have been hurried to an untimely end through such interference. A careful study of the results of operations, Schroeder states, leads to the conclusion "that, while ovariotomy may now be looked upon, except as regards possible advance in minute details, as a closed chapter, myomotomy, on the contrary, stands exactly in the opposite position."

Leaving the consideration of the female organs of generation contained within the pelvic cavity which have been subjected to operation by abdominal section, we pass through this gateway into the general cavity. Here we find the most brilliant achievements of modern surgery accomplished under the protecting ægis of antiseptic methods. It is quite true that some of the initial operations were performed before the era of asepsis; but they were very rare, and performed usually through errors in diagnosis.

In the order of time, operations for removal of the spleen follow those of the ovary, the first premeditated operation dating from 1826. Three conditions have been described by observers as indicating surgical interference:

1. A change in the normal position of the organ, giving rise to the movable or wandering spleen.

2. The organ in a state of hypertrophy, due usually to malarial influences, forming the ague-cake so well known in certain sections of our country.

3. Cystic degeneration, associated, as a rule, with leukæmia.

Of these varieties the first and second are most amenable to successful treatment by laparotomy, while operations in cases of the third form—the leukæmic spleen—have been followed almost universally by fatal results. The explanation of this is to be found in the condition of the blood, and not in inherent difficulties in the operation itself. Further investigations are necessary to determine the relation between leukæmia and the cystic degeneration of the spleen, in order to avoid, if possible, by preliminary constitutional treatment, the fatal results attending surgical interference.

Of thirty cases of splenectomy reported by Credé up to 1881, twenty-one died. Of the twenty-one cases sixteen were leukæmic, and in all death followed. In the nine successful cases of removal of the spleen, four were hypertrophied, two movable, two cystic, and one normal and free in an abscess of the peritoneum.

In a very able paper read before the American Surgical Association at its meeting in April, 1885, Dr. S. W. Gross reported two hundred and thirty-three cases of extirpation of the kidney, with a mortality of 44.63 per cent. Of these cases of extirpation, one hundred and eleven were by the lumbar incision, with a mortality of 36.93 per cent., and one hundred and twenty were by the ventral incision, with a mortality of 50.83 per cent. With this statement he proceeds in his paper to discuss the causes of death after nephrectomy by the two methods, presents in systematic manner the various lesions which have been treated by operation, with the percentages of mortality in each, classifies the operations, and concludes with the formulation of certain propositions for discussion based upon the analysis and careful study of the cases collated. These propositions are so complete that they may be said to present in a concise manner the rise and progress of the surgery of the kidney up to the date at which they were presented, and at the same time to furnish a guide to the performance of operations upon that organ.

Since the presentation of this paper in April, 1885, Dr. Gross has added, up to this date, one hundred and three cases to those reported at that time, and has kindly placed at my disposal the following information derived from their analysis and study. In the three hundred and thirty-four cases there were two hundred and six recoveries and one hundred and twenty-eight deaths, giving a mortality of 38.32 per cent. In one hundred and seventy-six of these cases the operation was performed by ventral incision, with ninety-five recoveries and eighty-one deaths, giving a mortality of forty-six per cent. In one

hundred and fifty-eight cases the operation was done by lumbar incision, with one hundred and eleven recoveries and forty-seven deaths, a mortality of thirty per cent. The results obtained in the one hundred and three additional cases give a decreased general mortality of 6.31 per cent.,—a decreased mortality for ventral operations of 4.83 per cent., and a decreased mortality for lumbar operations of 6.93 per cent. These results show that the death-rate has been decreased by the increased experience of the operators. He further states that the new cases add confirmatory evidence of the correctness of the conclusions stated in his paper above referred to, and which are accepted by all writers on the subject.

When it is remembered that up to twenty years ago premeditated operations upon the kidney were not considered, and that the tapping of renal cysts and abscesses was performed usually without knowledge of the organ involved until—possibly in abscess—the presence of a renal calculus disclosed the fact, and when we further reflect that up to that time all renal tumors removed by abdominal section were so done through error of diagnosis, we cannot but express surprise at the rapid development of the surgery of this organ.

The traditional dread of the results following the infliction of injury upon the peritoneum found its fullest exemplification in the treatment, in days gone by, of the liver, and thus it was always considered necessary to shut off the abdominal cavity by the formation of adhesions between the liver or gall-bladder, prior to tapping, in cases of cysts or abscesses of the former, and dropsy (when recognized) of the latter. This was done by carrying the incision to the peritoneum and packing the wound so as to excite inflammatory action. Later, tapping was performed without the danger of the passage of any of the contents of cyst or abscess into the abdomen. In abscess of the organ, especially if superficial, these adhesions are usually formed, and tapping or incision is rendered safe. In the treatment of hydatid cysts, at this day, it is regarded desirable to form adhesions between the liver and abdominal walls by packing the wound with iodoform gauze, and, if the cyst is deeply situated, dividing the hepatic tissue with the Paquelin cautery.

Wounds of the liver—punctured, lacerated, or gunshot—are chiefly dangerous by reason of the great difficulty presented in controlling hemorrhage in parenchymatous tissues. Abdominal section may in such cases be performed, catgut sutures introduced, and the Paquelin cautery or the aseptic tampon of iodoform gauze used, as advised by Dr. N. Senn. In cases of extensive subcutaneous lacerations or rupture of the liver, it occurs to me to suggest that temporary compression of the hepatic artery and portal vein, by means of long-handled padded forceps carried through the abdominal wound, may be of service in controlling hemorrhage.

Operations upon the gall-bladder had their beginning through errors in diagnosis, the distended sac being mistaken for an abscess or cyst of the liver, and being opened by tapping and incision. Some of these operations were reported as early as 1733, in which gall-stones were removed through the fistulæ. In 1867, Dr. John S. Bobbs, the brother-in-law of the distinguished Simon Cameron, of this State, performed an exploratory laparotomy, opened a distended gall-bladder, removed fifty gall-stones, sutured the incision in the sac, and closed the abdominal wound. The operation was followed by recovery of the patient,—the first operation in which cholestotomy was performed without the formation of a biliary fistula. In 1878, Dr. Marion Sims, then residing in London, performed likewise an exploratory laparotomy, incised a distended gall-bladder, and removed twenty-four ounces of fluid and sixty-six stones; the walls of the cyst were retrenched and attached to the abdominal wound, forming a biliary fistula. Sixteen stones were found in the gall-bladder at the autopsy, which was held nine days after the operation. Although biliary fistulæ had followed simple tapping and incision of distended gall-bladders, yet this was the first premeditated operation of the kind. The first operation performed with design was that of Kocher, of Berne, Switzerland,—cholecystotomy, with the formation of a fistula,—in 1878. Excision of the gall-bladder (cholecystectomy) was first performed by Langenbuch, of Berlin, in 1882. The formation of a new communication between the gall-bladder and the duodenum (duodeno-cholecystotomy), or between the gall-bladder and the transverse colon, as practised by Winiwarter in 1882, may be performed, as its feasibility

has been demonstrated by the operation of Winiwarter and confirmed by Dr. Gaston, of Atlanta, Georgia, through experiments upon dogs.

The indications for operations upon the gall-bladder by abdominal section have been well established.

Dr. Ohage, of St. Paul, Minnesota, reports in a recent paper (*Medical News*, February 19 and 26) fifty cases of cholecystotomy, with formation of fistulæ, up to date, with thirty-nine recoveries and eleven deaths,—a mortality of twenty-two per cent.; five cases of cholecystotomy without biliary fistulæ, three recoveries and two deaths,—a mortality of forty per cent.; and nine cases of cholecystectomy, with eight recoveries and one death,—a mortality of eleven per cent. In his tables Dr. Ohage has omitted (I do not know whether intentionally or not) the case of cholecystotomy performed by Dr. Keen and reported to this Academy about two years since, and the case of cholecystectomy performed incidentally by Dr. S. W. Gross when operating by ventral incision for extirpation of a tumor of the kidney.

It is not within the scope of this paper to discuss the question, now attracting the attention of surgeons, with regard to the relative merits of the two operations, cholecystotomy and cholecystectomy. It may be said that the decision of the question in the future will undoubtedly be influenced by the consideration of physiological relations and pathological conditions as well as by the results of operations.

Up to this period, the only pathological conditions of the pancreas which have been subjected to surgical treatment have been cysts due to obstruction of the duct. Of these a few cases have been reported,—one by Dr. Bozeman, in which a cystic tumor of the pancreas containing twenty pints of fluid was removed, abdominal section having been performed in the expectation of finding an ovarian cyst. The pedicle, an inch in length, was ligatured, and then divided. The patient made a successful recovery. Simple tapping and tapping and drainage, with suture of the cyst to the abdominal wall, have been performed in other cases with successful results. Carcinoma of the pancreas occurs possibly more frequently than cystic degeneration, and is not regarded at this time as amenable to treatment by surgical procedure, owing to the implication, as a rule, of important adjacent structures and the difficulties to be encountered in dealing with hemorrhage from the large blood-vessels which are in intimate relation with the organ. As Dr. Senn correctly states in his address in surgery delivered May, 1886, before the American Medical Association, the surgery of the pancreas belongs to the future. He, of all others, has contributed most to clear the way for this advance through the elaborate and extended experimental investigations conducted upon animals, the conclusions deduced therefrom having been presented in his very able paper read before the American Surgical Association in April, 1886.

Of all the operations performed upon the abdominal cavity, it may be correctly said that none exceed in brilliant achievements those performed upon the stomach and intestinal tract. The recital of the successful results obtained in the few reported cases of incised and gunshot wounds of the intestines treated through laparotomy is sufficient proof of this statement. In so short a period has this great advance been made that we may almost count the time by months. In contemplating this subject, who can avoid reflecting upon the great results which will follow in the treatment of gunshot wounds of the abdomen when, in the future, armies come in conflict, and to what an extent the surgical history of our late war would have been changed?

The fistula which followed the gunshot-wound of the stomach in the case of Alexis St. Martin demonstrated the feasibility of accomplishing the same result by operation, and gastrostomy has become an accepted operation in cases of stenosis of the œsophagus. Gastrotomy, or incision of the stomach, has been performed for the purpose of removing foreign bodies from the organ. Professor Loretta, of Bologna, Italy, has performed gastrotomy for the purpose of overcoming by forcible digital dilatation stenosis of both the cardiac and the pyloric orifice. Success has followed these attempts.

Perforating ulcer of the stomach has been successfully treated by excision, and gastrorectomy is advised in such cases.

The successful results achieved by Billroth in his cases of excision of the pylorus (pylorectomy) for malignant disease have proved not only the feasibility but also the justifiability of the operation, when

performed in the early stage of the disease. In cases in which pylorectomy is not possible by reason of the extent of the disease, temporary relief may be afforded by the formation of a communication between the stomach and upper portion of the duodenum or jejunum,—gastro-enterostomy.

Operations upon the duodenum and jejunum, having in view the formation of permanent fistulæ for the direct introduction of food into the intestine, have been performed, and have been justly characterized as unnecessary and unjustifiable.

Beginning with the early operations of Littré and Amussat upon the colon for obstruction (colotomy), and ending with the latest suggestion for the employment of laparotomy in treating pathological conditions of the intestines,—resection in cases of perforation due to ulceration of Peyer's patches in typhoid fever,—we find that the field of operation has expanded so as to include a number formerly regarded as beyond the resources of surgical art. These embrace, as recorded by Dr. Senn, subcutaneous laceration of the intestines, intestinal obstruction due to intussusception, to enteroliths, to non-malignant cicatricial stenosis, volvulus, torsion, internal hernia, and strangulation by cicatricial bands.

Enterectomy, or excision of a portion of the intestine, has been performed in a number of instances, with the most remarkable success, for gangrene, wounds, and other pathological conditions. Koeberle's extraordinary case, familiar to you all, in which six feet of the intestine were removed, indicates to what extent enterectomy may be successfully performed.

In passing judgment upon the suggestion of resection in intestinal perforation in typhoid fever, we must remember that many of the operations upon the abdominal cavity now regarded as legitimate and firmly established were a few years back regarded as equally impracticable, if not absurd.

To complete the list of conditions amenable to treatment by abdominal section, it is necessary to add to those stated above tumors of the omentum, tumors of the mesentery, retroperitoneal tumors, ascites, acute tubercular and chronic peritonitis by laparotomy and local treatment, typhlitis and perityphlitis, and rupture of the diaphragm with hernia.

I am not unmindful of the fact that in this somewhat disjointed paper I have given but a faint outline of the marvellous achievements accomplished in the surgery of the abdomen within the past few years. Yet I may hope that some good may follow,—that the time has not been misspent in simply calling attention to the subject. Knowledge upon this subject is daily increasing, facts are being established, and confirmatory evidence adduced. While much has been accomplished, much remains to be done. Time must be given to the more careful study of symptoms, in order that our methods of diagnosis shall be perfected. The limits of diagnostic laparotomy must be narrowed by the acquisition of diagnostic skill.

Calm judgment must take the place of blind enthusiasm in the determination of indications for operative interference, and, above all, honesty of purpose must guide the hand of the operator. The severe condemnation of the profession must be placed upon the indiscriminate performance of operations upon the genital organs of hysterical females, as well as upon the proposal to spay all insane women, so that the progress of abdominal surgery shall not be retarded or its good repute tarnished. The morbid desire for notoriety must not be gratified at the expense of suffering and confiding humanity.

The great advances in surgical art impose upon the surgeon of to-day higher duties and greater responsibilities. A few years ago he could, with undisturbed conscience and calm mind, watch with folded arms the progress to the end, of certain conditions with which to-day he must deal, not too soon, nor yet—equally, if not more important—too late, under the guidance of sound judgment, and with the knowledge which increasing experience and careful investigations have so liberally provided.

THE IRRITABLE HEART AND THE DEPRESSED HEART.

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"THE irritable heart" has been the subject of frequent contributions to medical literature since Da Costa's classical description of this condition in 1871.

The symptoms are "nervous palpitation," either alone or in combination with shortness of breath, especially on ascending stairs or climbing heights; certain neurasthenic phenomena, as dizziness, sick headache, numbness in one or more limbs, dragging or compressing pains in the region of the heart, back, hips, or legs; sleeplessness in spite of great fatigue, and such-like complaints. Certain objective signs, as rapid, irregular pulse, forcible, apparently hypertrophic apex-beat of the heart, often with slight concussion of the entire cardiac region even extending beyond the mammillary line, are accompanying symptoms. The area of heart-dulness is, however, normal, and other physical signs of cardiac disease are absent. Neither this strong apex-beat nor the pulse, varying from small and weak to hard and jerky, indicates increased heart-pressure. In fact, the pulse at the wrist is weakened, and can be made to disappear completely by raising the arm to a perpendicular position. The forcible apex-beat and the strong pulse are produced by disordered innervation of the heart and the arterial walls, causing apparently spastic contractions. Which of the nervous apparatus connected with cardiac innervation is here primarily affected, it is impossible, in the present state of knowledge, to determine.

The palpitations attending Basedow's disease, affections of the coronary arteries, or degenerative changes in the heart, are easily differentiated from those due to irritable heart, and are hence left out of consideration here.

The remaining organs of the body present nothing peculiar. The kidneys appear healthy, but secrete irregularly. At times the urine is scanty and rich in urates. Most frequently, however, the urine is profuse, pale in color, and of low specific gravity. The skin, especially about the face, neck, and shoulders, is often thickly covered with acneiform eruptions. The bodily temperature inclines to become elevated after the slightest disturbances, catarrhs, etc. Hands and feet tend to manifest sensations of heat rather than the contrary.

The following are generally specified as causes of this condition: hereditary nervous organization, exhausting diseases and hemorrhages, and anæmic conditions otherwise produced; mental and physical over-exertion. (It was in soldiers during the late civil war that Da Costa first thoroughly studied this condition.) The abuse of stimulants—alcohol, coffee, tea, and tobacco—and the influence of various poisons must also be included among the causes.

In my experience the combination of symptoms above described has been much more frequently met in young persons than after middle life. After the age of forty the irritable heart is comparatively rare, but, especially in males, a different train of symptoms present themselves which will be described below. The irritable heart is most frequent in young men from seventeen to twenty-five years of age. Here the specific causes are: in one class of cases great anxiety in the performance of duty, over-exertion of vital powers, sedentary occupation in crowded apartments, etc.; in others, ascetic repression of the natural desires and passions, masturbation, or the apprehension created by reading popular works upon the subject and the consequent anxiety with regard to connubial capacity; in others still, defiance of all the rules of health, rapid eating of large quantities of indigestible food, or drinking excessive quantities of various fluids; in many, reflex neuroses from nasal, pharyngeal, or gastric catarrhs, increased by excessive smoking of tobacco; in still others, intemperance in the use of alcoholic liquors, or venereal debaucheries; and probably in most cases a number of these causes combined are responsible for the condition described.

Young girls suffering with chlorosis, anæmia, digestive disorders, or genital disturbances may likewise present the symptoms of irritable heart.

Let these youthful individuals alter their mode of living; let the overtaxed clerk or mechanic change his occupation for one less confining or exacting, or adopt a country life; let the masturbator cease his degrading practices and become, in consequence of rational treatment and earnest encouragement, a proud husband and father; let the gourmand, the sot, and the debauchee alter their mode of living and become temperate, well-behaved, and regular in their deportment; let the chlorotic or hysterical girl be converted by a happy marriage into an assiduous housewife and fond mother,—and the phenomena of irritable heart rapidly disappear and a condi-

tion of good health is re-established. All subjective complaints now cease; the pulse becomes full, slow, and regular; the apex-beat is easily perceptible in its normal situation, and all the heart-sounds are normal; the complexion becomes fresh and rosy, a general plumpness replaces the appearance of malnutrition, and a sense of comfort and well-being takes the place of the morbid irritability of the system.

Few can maintain this condition of health, however, throughout life. Persons of vigorous constitution and active habits may be able to absorb, transform, and again get rid of an excess of solid and liquid food without injurious results; others, by habitual restraint and moderation in eating and drinking, avoid the dangers to which most persons subject themselves by overtaxing their assimilative organs and vascular system. I know a banker who keeps well nourished and in excellent health upon a daily allowance of two ounces of meat, a few spoonfuls of grits, two to three ounces of bread, and a half-pint of fluid (coffee, tea, milk, and water included). In summer a little fruit and about half a pint of fluid are added to the above allowance. This gentleman performs from twelve to fifteen hours of hard mental labor every day upon the slender fare mentioned.

Such examples of moderation or self-denial are, however, rare. The majority of those who formerly suffered from irritable heart, but who regained good health, remain in this condition only until the youthful resistance and elasticity become weakened and relaxed at the entrance into the middle period of life. At the age of forty and upward, increased cares and responsibilities, sickness, the habit of eating and drinking more than the comparatively inactive body demands, produce symptoms which at first view seem to indicate a return of the irritable heart from which the patient suffered twenty years before. The family physician is sought for, and the burden of complaints recited to him: palpitation, constriction of the chest, shortness of breath, especially on ascending stairs or heights, neurasthenic dyspepsia, dizziness, numbness in the limbs, sick headache, dragging pains in the cardiac region, the back and hips, stiffness of the back and limbs on awakening. The pulse is increased and irregular, the skin dull and more or less insensitive, yet easily irritated. But if the physician compares the present condition of his patient with that of fifteen or twenty years before, as noted in his case-records, he will become sensible of marked differences. The pulse is increased in rapidity, but, in spite of the patient's appearance of robust health, is weak, small, and compressible. The apex-beat of the heart is not at all perceptible, even in forced expiration and with the body bent forward. A slight concussion at the base is all the evidence of heart-impulse that even the most careful physical examination can elicit. The area of heart-dulness is normal and the valvular sounds pure, with the exception perhaps of a more or less pronounced accentuation of the second pulmonary sound.

In spite of the relatively small pulse, the propulsive power of the heart remains good; elevation of the arm does not affect the force of the pulse at the wrist.

The quantity of the urine is diminished relatively to the amounts of fluid ingested. The specific gravity is increased, ranging from 1025 to 1040. The urine is free from albumen and sugar, but is rich in urates and probably oxalates. The skin is dull (bilious); brownish spots are often found upon the hands, and at the lower portion of the tibia and near the ankles may be seen those rusty-colored pigmentations—from the size of a pin's head to that of a dime—to which Oertel first called attention as a sign of overfilling of the capillaries and veins of the subcutaneous connective tissue. Occasionally there is a tendency to moist eczemas, and the mucous membranes, especially the conjunctivæ, are apt to become chemotic.

The temperature is abnormally low. On awaking in the morning and before rising, the sublingual temperature, although the instrument remains in the mouth for fifteen minutes with the bulb pressed close to the root of the tongue, is frequently not above 96°, 96.5°, or 97° F. The patients are more likely to complain of cold than of heat. They are not actually sick, but constantly complain of a sense of discomfort or *malaise*.

In brief, these symptoms may be recapitulated as follows: *The apex-beat of the heart not perceptible, or perceptible only under the most favorable conditions; weak, rapid, and often irregular pulse, easily in-*

creased to one hundred or one hundred and twenty beats per minute upon the slightest exertion; difficulty of breathing, increased by slight exertion; often hyperidrosis, an abnormally low morning temperature, with dryness of the mouth and tongue. Relative decrease in quantity and high specific gravity of the urine, the characteristic pigmentations and morbid disposition of the skin, subjective complaints of a neurasthenic character, diminished sexual desire, and dragging pains and stiffness in the back and hips on awaking. To this collection of symptoms, it seems to me, the designation of *the depressed heart* may appropriately be given.

(To be continued.)

REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, A.M., M.D.,

Professor of Otology, Philadelphia Polyclinic, etc.

DEFECTS OF HEARING IN RAILWAY-EMPLOYEES—RELATION OF SAME TO THE SAFETY OF THE TRAVELLING PUBLIC.

DR. LICHTENBERG, of Buda-Pesth, insists upon the importance of good hearing in train-hands of railroads, and he also shows that locomotive engineers and firemen are especially liable to ear-disease from the exposure incident to their work (*Archiv f. Ohrenheilk.*, Bd. xxiv., 1886). He then calls attention to the numerous acoustic signals and the few optical signals.

[This would hardly hold good in some parts of this country, where the optical signals predominate.—REP.]

Of two hundred and fifty railroad-hands examined by Lichtenberg, ninety-two (or 36.8 per cent.) were affected by some aural disease. Thirty-two cases were of a catarrhal form, three times an affection in the labyrinth was found, and thirty-six times the difficulty lay in the external auditory canal. He then referred to the statistics of railway-accidents, and maintained that, in view of the importance of acoustic signals and the frequency of their occurrence, and in view also of the numerous aural imperfections in the railway-hands, railway-accidents were not improbably directly the consequence of defective hearing in the employees.

THE EFFECTS OF PILOCARPIN UPON THE MUCOUS MEMBRANE OF THE TYMPANIC CAVITY.

W. Kosegarten, of Kiel, has found the use of pilocarpin beneficial in cases of dry catarrh of the middle ear complicated by labyrinth-affections (*Archiv f. Ohrenh.*, xxiv., 1886). The treatment must be prolonged for at least six weeks, if benefit is to be obtained, and the most successful cases have been those treated for three months. As a rule, an injection daily of about one centigramme of pilocarpin, except on every seventh day, was given in the cases treated the longest time. It was observed in cases with transparent membrana tympani, and even in one case with a large perforation in the membrane, that the injection of pilocarpin was regularly followed by intense congestion of the mucous membrane of the drum-cavity, and in some instances secretion ensued in the cavity of the tympanum. This process favors a loosening or softening of the stiff tissues and adhesions in the drum, and hence the conducting apparatus is made more vibratile. It is even claimed that exudations have been seen to become absorbed under this treatment, and the membrana tympani assume its normal color and transparency.

HEMORRHAGIC OTITIS IN BRIGHT'S DISEASE.

In the case related the aural disease was preceded by paraplegia (Dewèvre, *Lyon Médical*, October, 1886, and *Annales des Maladies de l' Oreille*, December, 1886). Intense pain was the first aural symptom. The discharge, at first red, became serosanguinolent, and then purulent; the mucous membrane of the tympanic cavity became intensely congested, the mastoid region red and œdematous, but not swollen. The patient recovered, but the hearing remained impaired. During the otorrhagia there was also epistaxis. Attention is drawn to the fact that this form of aural affection is sometimes seen in Bright's disease. Reference is made to the observations of this occurrence in Bright's disease reported by Rayer, Lecorché, and Fournier; later, by Rosenstein and Dieulafoy (Thesis of Pissot, 1878). Trautmann (1879), Auvert (Thèse de Paris, 1879), Alibert (Thèse, 1880), and Domergue (Thèse de Paris) have reported cases of similar aural complications in Bright's disease.

AURAL DISEASES IN DIABETES MELLITUS.

Schwabach observed a case of otitis media suppurativa in a diabetic patient, in whom an artificial perforation of the mastoid was entirely successful. The patient died two years later of apoplexy, after the

fistula in the mastoid had entirely healed and all aural symptoms had subsided (*Deutsche Med. Wochenschr.*, No. 52, 1885; *Archiv f. Ohrenh.*, Bd. xxiv., 1886). The opinion is expressed by Schwabach that this operation cannot be entirely rejected in the case of diabetic patients, as held by Kirchner and Kuhn, but should be attempted if it seems to offer the only chance of saving life in dangerous cases.

DETERMINATION OF IMPORTANT TOPOGRAPHIC RELATIONS IN THE TEMPORAL BONE BY THE EXTERNAL FORMS OF THE SKULL.

Dr. Otto Körner, of Frankfort-on-the-Main, has endeavored to show, from his examination of sixty skulls, that it is possible from the external configuration of the skull to determine some of the important features of its internal structure (*Archiv für Ohrenheilk.*, Bd. xxiv., p. 67, 1886). He gave the name of "cranial index" to the result obtained by dividing the distance between the root of the nose and the most prominent point in the occiput by the distance between the parietal protuberances. This index varies between 1.55 cm. in dolichocephalic crania and 1.076 cm. in brachycephalic crania. It appears, from a table of measurements, that the floor of the middle fossa of the skull in the dolichocephalic crania lies higher above the external acoustic meatus than in the brachycephalic.

In regard to the transverse sinus it is shown that in brachycephalic crania on both sides it lies, on the average, farther outward and projects farther into the mastoid process than in dolichocephalic crania. Regardless of the form of the cranium, the sinus lies, on the average, farther outward on the right than on the left side.

The thickness of the sinus-wall was equal in ten per cent., thinner on the right side in seventy-seven per cent., and thinner on the left side in thirteen per cent.

Practically, in respect to the artificial opening of the mastoid process, it follows that the smaller the cranial index the farther forward the opening in the mastoid must be made.

In adult skulls with an index of 1.30 cm. and less, the operation must be performed, if possible, in front of the line of attachment of the auricle, especially when the right antrum must be reached. In the new-born and very young children, as is well known, the transverse sinus does not lie in an exposed position.

[This also shows that it is always safe to operate as nearly as possible through the posterior wall of the external auditory canal in attempting to reach the mastoid antrum.—REP.]

SPONTANEOUS PERFORATION IN THE MASTOID PORTION OF THE TEMPORAL BONE.

Dr. Huntingdon Richards, of New York (*New York Medical Record*, December 11, 1886), has reported a singular case of "mastoid disease," terminating as indicated in the caption, in a man 26 years old. The patient took cold, and on the third day after the initial chill pain in the ear was felt. That night the ear began to discharge. He was not seen at first by Dr. Richards, but was treated by some one who diagnosticated a perforation in the membrana, and who prescribed "drops" for the ear. About two weeks after the first attack he was seen by Dr. A. H. Buck, "who found a slight prolapse of the upper wall of the external auditory canal, the membrana tympani red and swollen, but not markedly bulging, and having a small perforation." The patient complained of throbbing in his ear and intermittent otalgia. He was referred by Dr. Buck to Dr. Richards, with the advice to immediately perform paracentesis of the membrane and a Wilde's incision of the mastoid integument, "with poulticing and frequent use of the Angelo douche, as a means of obviating if possible the necessity for drilling the mastoid." This was done, but was not productive of any change in the appearance of the membrana or in the auditory canal. A discharge of thick pus continued, and a gravitation douche was substituted for the Angelo, a strong solution of boric acid was added to the water, and the canal was to be syringed every hour. Two days later the condition of the patient was unaltered, and three days still later there had been pain in the ear, relieved, however, by the douche. The canal was now found less swollen, but the discharge was still profuse; the wound over the mastoid was discharging but little. This was rubbed with the solid stick of nitrate of silver "for counter-irritation," and the membrana tympani was again freely incised. The ear then felt better, and the hearing seemed to improve a little. The douching was continued. Three days later the condition was the same, and some pain was reported; still three days later no pain in the ear, though discharge continued; the

membrana was less swollen, and the position of the perforation, which was 1.5 mm. in diameter, was diagnosticated as just back of and above the tip of the manubrium.

Four days later the wound over the mastoid had healed, and there was no redness of the integument and no increase of tenderness on pressure over this region. There had been no pain in the head, nor earache, for four days. The opening in the membrana tympani, however, seemed too small for perfect drainage or cleansing of the drum-cavity, and another thorough incision in the membrane was made, being carried from the perforation upward and backward to the periphery of the membrane. The patient at this time called attention to "a slight swelling situated back of the mastoid process, and over its point of junction with the occipital bone." This spot gave no pain, but was tender on pressure.

Two days subsequent to this discovery, it was found that the incision in the membrana tympani had healed completely and firmly. The general condition of the patient was good, and he had no pain in his head, nor earache. The swollen spot behind the ear, however, was more tender on pressure, but not painful. Careful palpation seemed to justify the suspicion that deep-seated fluctuation could be detected, but, the suspicion being not well founded, apparently, the patient was permitted to return to his work. Three days later the condition seemed unchanged. The swelling behind the ear was to be painted daily with tincture of iodine. In the course of two days the patient came complaining of "decided pain in the side of his head and in the region of the aforesaid swelling." The latter had increased in size, being now about an inch and a quarter in diameter, and palpation revealed undoubted fluctuation. Palpation, furthermore, caused pus to suddenly well out of the auditory meatus. It was found, upon inspection, that this pus came through the old hole in the centre of the drum-membrane. The abscess over the mastoid was opened, the knife passing down fully one inch through to the bone, and a fairly large quantity of blood and pus escaped. Syringing the abscess caused some of the fluid to escape from the external auditory meatus, and also occasioned severe pain in his head, but no dizziness. Continuance of hemorrhage led to stuffing the wound and abscess-cavity with lint; poultices were ordered, and douching the ear was continued.

The next day the patient complained of frontal headache and nausea. Subsequently there was some vomiting, the temperature rose to 100.2° F., and the pulse was 92; no pain in or about the ear. All the symptoms improved excepting the nausea and frontal and occipital headache, which still continued to some extent. The depth of the wound down to the bone was now half an inch, and by prolonged probing in the upper part of the wound an opening into the bone half an inch deep was found. Weak solutions of bichloride syringed through this opening in the bone escaped through the nostrils and were felt in the tympanic cavity. The hearing now improved from half an inch to nine inches for a watch, and the temperature and the pulse became lower; there was also less headache. Syringing the wound in the same way the next day did not cause fluid to pass through the nares, but the patient asserted that it was felt in the ear. Syringing increased the discomfort in his head, and the patient attributed all his headache for four days to the syringing done at the operation.

It is suggested by Dr. Richards that, considering the course and depth of the bone sinus, it may not be impossible that there was some exposure of the dura mater.

The location of the sinus in the bone seemed, by careful measurements, to have corresponded "pretty closely to the opening of the mastoid foramen leading into the lateral sinus." It is also suggested that the opening in the bone through which the syringe was inserted might have been the mastoid foramen pathologically enlarged, or a gap similarly formed in the masto-occipital suture. In any case, the cancellous tissue in this case extended very far backward.

In the course of two weeks more the mastoid wound had entirely healed, and the membrana tympani showed that it was returning to a normal condition. It was thought by Dr. Richards that "a more active and prompt treatment at the beginning of the attack probably would have saved the patient much pain, and perhaps might have cut short the pathological process which subsequently developed into such a serious condition."

(To be continued.)

TRANSLATIONS.

RESEARCHES ON THE MICRO-ORGANISMS OF THE MOUTH.—M. Vignal publishes in the *Archives de Physiologie* the first part of a memoir on the micro-organisms of the mouth. In this memoir he proposes to set forth the action which these micro-organisms may have on a series of simple alimentary substances, with the object of investigating the influence exerted by the gastric and pancreatic juices and the bile on these micro-organisms, in order to ascertain from this what becomes of them when carried by the food and saliva into the digestive tube. A great number of micro-organisms inhabit the mouth in the normal state; a still greater number may be found there accidentally introduced either by the food or by the inhaled air. M. Vignal endeavored by using a few precautions to get rid of these micro-organisms. He gathered them only in the morning, after having brushed the mouth the evening before with sterilized water, and with a brush likewise sterilized in steam at 120° C. In this way the micro-organisms which live only in the remaining alimentary substances were eliminated. To know the number that inhabit the mouth the microscope will not suffice, as, on the one hand, many of them so much resemble one another that it is difficult to recognize them by sight alone, while, on the other hand, a micro-organism may be more or less long and thick, although belonging to the same species. Hence the necessity of cultivating and isolating them, and of forming pure cultivations. This the author did.

He found in the buccal coating and in the dental tartar eighteen different species of micro-organisms, and from these he succeeded in isolating seventeen. The eighteenth, which he did not succeed in isolating, was the *spirochete denticula*. The author, like his predecessors, did not succeed in finding a favorable medium for the cultivation of this micro-organism. Of the seventeen species which he cultivated, M. Vignal found that sixteen were aerobic and one anaerobic. Three of these micro-organisms are micrococci, thirteen are bacilli, and one is a vibrion. Seven of them have already been described by different authors: they are the *bacterium termo*, Koch's potato-bacillus, *bacillus subtilis*, *staphylococcus pyogenes albus* and *aureus*, and the leptothrix. Three others have perhaps already been observed; the coccus "*a*" of the author appears to have been seen by Miller in dental caries; the bacillus "*e*," perhaps described by Chyre and Cheshire under the name of *bacillus aluci*; and, finally, the bacillus "*e*," which is perhaps the *bacillus ulna*. But, as the descriptions which authors have given of these three micro-organisms are not sufficiently precise, M. Vignal abstains from giving their names to those he had seen.

In this first part of his memoir the micro-organisms which the author has met with are alone described, and he has given the description of them in different mediums of cultivation, in order that they may be recognized from the differential character presented by their cultivation. The author has tabulated the principal characteristics of the cultivation of these micro-organisms, in order that they may be easily detected by comparison. The memoir is accompanied with eight plates, which represent the aspects of these micro-organisms in the different mediums of cultivation, and the spots they form on gelatin. All these illustrations have been made on the same scale. Besides the plates, half-schematic figures are dispersed throughout the text, representing the aspect of culture-colonies in needle-holes in the peptonized gelatin contained in the tubes.

The first part of the memoir is, so to speak, but the introduction of a series of researches. For, in addition to the influence exerted by these micro-organisms on a few simple alimentary substances and the observation of the effect which the digestive fluids have upon the former, the author announces that he is about to begin researches concerning the micro-organisms in fæcal matter, and that he has already begun, in conjunction with M. Malassez (whose competence in pathological anatomy needs no comment), a series of researches on the action which these micro-organisms exert upon animals. When these researches, together with those which the author is making in collaboration with M. Malassez, shall have appeared, the results will be made known to our readers.

WHOOPING-COUGH.—A series of five cases treated with continuous inhalation of carbolic acid by means of a mask (worn from eight to twenty-four hours daily), with good results, is reported by Dr. Pick (*Deutsch. Med. Zeitung.*)

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EDITORIAL.

PREVENTIVE INOCULATIONS.

AT a recent meeting of the Epidemiological Society of London, Mr. Willoughby read an important paper upon the prophylactic treatment of certain infectious diseases by the practice of inoculation. Certain of the facts therein emphasized, though perhaps familiar in themselves, acquire increased significance from the manner in which they are associated and presented. The two characters by which a large class of diseases are distinguished from all others are, first, the spontaneous extinction of the morbid process within a limited, often definite, time; and, secondly, the immunity against subsequent infection, more or less lasting and complete, which follows the attack. These two phenomena have been regarded as closely related, but until lately no rational explanation has been suggested. Nevertheless, the whole scheme of protective inoculation rests upon them as a basis.

The first condition of such an inoculation is that the virus used should be derived, directly or indirectly, from the disease it is intended to avert. Cow-pox protects against smallpox only because no specific difference exists between these two diseases; vaccinia being in all probability, as stated by Mr. Willoughby, smallpox modified by being passed through the cow. The second condition is that the disease is one that does not recur. All non-recurring diseases are, or are presumed to be, bacterial. The converse of this, however, is not equally true, as some diseases, such as septicæmia and tuberculosis, run on indefinitely, while others, as diphtheria and cholera, confer no immunity against subsequent infection. In these, therefore, there can be no successful preventive inoculation.

The method of direct inoculation with the unchanged virus is open to the grave objection that, however great the immunity conferred and however small the risk incurred by the individual, the disease is unchanged and retains its infectious qualities. The practice of smallpox inoculation and of ovination have always been found to raise the total mortality from the respective diseases.

The next step in the evolution of the process is vaccination. Jenner's operation is as yet the only instance of the application of this method. But, as Willoughby suggests, there is no reason why some animal should not be found to play for the sheep the part played by the cow for man. In truth, Dr. Klein's experiments with the disease at a farm at Hendon, which he called "Cameron's disease," lead to the conclusion that it stands in the same relation to scarlatina as cow-pox to smallpox, and that it may be possible to employ it in the same way. If so, this would be "vaccination" in every sense except perhaps the etymological one.

The method of Pasteur, the so-called "method of attenuation," is open to the same objection as inoculation, with the yet more serious one added that, as it is impossible to standardize the attenuations, they sometimes fail to confer any protection whatever, and at other times they have caused the death of the animal experimented upon. For this reason they cannot safely be resorted to in man, nor indeed, except under certain circumstances, can they be employed by existing methods with sufficient certainty as to the result in the case of the domestic animals.

A fourth method consists in the inoculation of the products of the development of the bacilli without the bacilli themselves. Low forms of life, such as those concerned in the process of fermentation,

putrefaction, etc., as well as bacilli formed in the fluids from which they grow, are associated with chemical products such as sepsin, which give rise, after absorption into the blood, to the condition known as septicæmia. In some cases, when these are accumulated to a certain point, as in alcoholic fermentation, further development of the organisms is arrested. It has been suggested that something analogous to this occurs in the so-called zymotic diseases, and that this may be invoked to explain the extinction of the febrile process. This accumulation of chemical products could not, however, explain the subsequent immunity, since such products would be eliminated, if the patient survived, in the course of a few weeks at farthest.

The experiments of Dr. Salmon, of the United States Bureau of Agriculture, with swine-plague lead to the inference that the products of the development of the bacilli of any such disease so modify the constitution of the bioplasm of the tissue as to render it incapable of again affording a pabulum for the bacilli. Further, since cells to which a special character has since been imparted tend, as in the case of carcinomata and other neoplasms, to transmit it to those to which they give rise in the act of proliferation, this inability to support the growth of the particular bacillus may persist for many years. Since, however, they probably tend to revert to their original character, susceptibility is sooner or later reacquired.

This latest method promises results of incalculable importance and of the widest application to the prevention of the infectious diseases of man and beast. In its practical application it is necessary to identify the specific bacillus, find a medium suitable for its cultivation, and finally to determine its thermal death-point or remove it by the Pasteur-Chamberland filter. The process is wholly free from the objections to which first inoculations and attenuations are open, seeing that the phenomena induced are those of the action of a poison, whatever it may be, actually antagonistic to the disease.

VOLUNTARY SUICIDES BY CHILDREN.

WITHIN a week the coroner has been called to investigate the deaths of two children in this city, both of whom, in all probability, committed voluntary suicide. A doubt is implied because the exact circumstances attending the death of each will never be known, as the only witnesses present were children younger than themselves, but circumstances point strongly to suicide as the only explanation. The vital impulse is so strong in childhood, and the idea of death so repugnant at this period of life, that voluntary self-destruction by children seems to strike us with horror as a manifestation of a peculiarly abnormal condition of society. Such an occurrence would be impossible in a community normally constituted, where the burdens of life are properly proportioned and equally divided. The physician, philanthropist, and political economist are equally interested in the problem presented by these unhappy occurrences, in which the question of insanity evidently does not arise, not because insane people do not hang themselves or because chidren do not become insane, but because the form which insanity takes in children is not suicidal mania.

The details, as they appear in the daily papers, are briefly as follows. Annie N., a motherless girl, twelve years of age, who bore upon her shoulders, unassisted, the reponsibilities of housekeeping as well as the care of younger children, had committed some childish peccadillo for which she had reason to anticipate corporal punishment from her father, of whose ministrations her previous experience had inspired her with a lively dread. When the father returned

from his work he discovered not only that his supper had not been prepared by the child, who had expected a beating, but also that she had been—to all appearances, at least—so wicked as at once to escape his fatherly correction and to break up his *ménage*, by hanging herself to a door-frame in their miserable dwelling. Among the annals of the poor could any be more melancholy than this? A child, with the responsibilities of womanhood thrust prematurely upon her, and daily engaged in a dull round of work beyond her strength, whose only incentive to right conduct consisted in the promise of a "licking" if she failed to attain a standard arbitrarily established by a paternal government! Can we wonder that such a child should seek to escape at any hazard from the accumulated miseries of her existence? Her death-bed may find no chronicler like that of Little Nell or Poor Jo, but her wounds are dumb mouths which appeal directly to the heart.

The second case was clearly one of imitation. A little boy, thirteen years of age, in good health and usually cheerful, having been much interested in the accounts of the former suicide, went into the cellar of his residence, and, fastening a rope to a beam, adjusted a loop round his neck, and deliberately swung himself into eternity. For this death the morbid demand for cheap, graphic illustrations in flashy papers must be held responsible.

Many children who saw the pictures of the little girl dangling in the frame of the door, with the fatal rope around her neck, will be unable to shake off the horrid representation, which for them possessed a veritable fascination; and for months to come it may remain the ruling idea. It has been repeatedly noticed that among adults the published account of some novel method of suicide has been followed by many imitators of the original; and a similar explanation of some epidemics of crime has been frequently given.

A PLEA FOR THE BETTER VENTILATION OF CHURCHES.

OF all public buildings in civilized communities, churches are notoriously inadequately ventilated. Apparently, in the minds of architects health and comfort are considered of secondary importance when compared with the technical details of structure. A well-known professor of chemistry of this city used to declare that he could tell, simply by his olfactory sense, whether the persons whom he passed on the street on Sunday had been to church or not. With him the odor of sanctity represented something substantial, and was not a mere figure of speech. City churches, subject to overcrowding, are usually furnace-heated: too often the air for the flues is taken directly from the cellar, in which there may be several more or less objectionable sewer-connections. Country churches, which happily are not open to this criticism, are, on the other hand, kept closed during the winter months as tightly as possible in order to economize fuel. The result is partial asphyxia of the congregation, which leads to complaints of droning sermons and drowsy hearers. Under such circumstances the system is prepared for an attack of bronchitis or pneumonia, which may be lighted up on suddenly going from the heated and vitiated atmosphere to the cold air outside. Occasionally some one faints and has to be carried out; and a correspondent of a religious journal thinks that the sudden death of ministers in the pulpit is attributable to the impure air. The question of the ventilation of churches is certainly deserving of more attention than it seems to have yet received.

DR. WILLIAM HUNT, of this city, recently met with a serious accident by a wagon knocking him down on the street and causing fractures of his clavicle and humerus and other severe bodily injury.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE College of Physicians of Edinburgh has set a good example by taking steps to found a Research Laboratory, for the use, in the first place, of its own Fellows, members, and licentiates, and after them of other investigators. A scientific superintendent is to be appointed, at the modest salary of two hundred pounds a year. Meanwhile, the members of the Council of the College of Surgeons in London appear to be unable to make up their minds as to the disposal of the Erasmus Wilson bequest: the memorial to which I referred in my last letter must have shaken the determination of the most opinionated members, for the Council, at its last meeting, determined to spend the comparatively trifling sum of fifteen thousand pounds on building operations for the extension of the museum. It is stated, with suspicious ostentation, that this modest expenditure is not to be taken to mean that the gigantic scheme to spend the whole Erasmus Wilson bequest on bricks and mortar, plaster casts, wax models, and preserved specimens in bottles has been abandoned, but it is hardly likely that it will be revived in its original crude form. The University of Cambridge, which is by no means wealthy, has voted ten thousand pounds for enlarging the physiological laboratory, and the College of Physicians in London will probably apply the small income arising from the Croonian trust fund, which, owing to new dispositions, is now much more valuable than formerly, to the furtherance of clinical and therapeutical research, so that the College of Surgeons will not fail in its duty owing to any want of good example. The Society of Medical Officers of Health has presented a memorial to the Council, praying it to establish a laboratory for instruction and research in bacteriology. A laboratory for pathological chemistry is also very much wanted. Either or both could probably be maintained at a very small cost.

Charles Dickens is generally credited with having been the first to use the novel for the purpose of exposing faults in our social system. "Oliver Twist" and "Nicholas Nickleby" were not only novels, but, to parody a famous definition of history, philanthropy teaching by example. Modern English novelists in search of a social sensation have, during the last decade, frequently built up their plots on the lunacy laws. Several lawsuits which have resulted in verdicts in favor of persons alleged to be insane, who have obtained damages against physicians for signing certificates of lunacy without due care, have still further operated to produce a mass of opinion in favor of an alteration in the law. This influence has been powerfully reinforced by the anxiety exhibited not only by ordinary practitioners, but by the majority of alienists in this country, to be more securely protected from the serious danger to which all are now liable,—of being called upon by a recovered madman, or more often mad woman, to defend in a court of law the truth of certificates given perhaps many years earlier. A case of this character was recently decided in favor of the medical practitioner, but not until he had been put to very considerable expense in defending the action. Although he obtained a verdict without difficulty, it is now reported that the plaintiff has appealed. For three years in succession the government of the day has introduced a bill to amend the lunacy laws; in 1885 and 1886 the resignation of the government involved the disappearance of the bill; and, as the political future is very uncertain, it is difficult to feel very sanguine as to the fate of the two bills introduced into the House of Lords on February 7, as the amending bill provides that no person shall be received or detained as a lunatic except under an order signed by a judge of a county court, a stipendiary magistrate, or a justice of the peace; the judicial functionary chosen in any given case will be bound to give notice to the alleged lunatic that he has been petitioned to make an order, may have a personal interview with the alleged lunatic if he thinks it desirable, and must grant such an interview if the alleged lunatic demand it. The countersignature of the judicial functionary is intended as a safeguard to personal liberty, and was undoubtedly framed in the interest of alleged lunatics; yet the chief opposition has come not from the alienists or the medical practitioners, who would be glad enough to shift the responsibility on to the broader shoulders of the squire or the county-court judge, but from the Commissioners in Lunacy in the interest of lunatics; they have contended that the publicity inseparable from the judicial inquiry would have the effect of leading the friends of persons afflicted with mental disorders to conceal the fact, and retain them at home until the chances of recovery had vastly diminished. Prompt treatment by skilled physicians is of the utmost importance to the afflicted individual, and it is well known that the prognosis becomes more hopeless with every succeeding month, until after a year but little hope remains. The late Earl of Shaftesbury, the great champion of the oppressed, felt so strongly on this point that he resigned the chairmanship of the Board of Commissioners in Lunacy, a position which he had held for fifty years, rather than appear to lend any sanction to the bill. A concession to these objections appears to have been made in the bill just introduced, for it is provided that in cases where the judicial signatory has satisfied himself that it would be prejudicial to the alleged lunatic, or dangerous to the

public, he need not give the notice mentioned above to the alleged lunatic. The bill therefore practically leaves everything to the discretion of the judicial signatory, who may be guided by personal timidity, or by the medical opinions, or by the private influence of friends, but certainly not by knowledge. Other provisions of the bill will have the effect of gradually reducing the number of private asylums, for no new licenses are to be issued, and the public authorities will be encouraged to provide accommodations for private patients. The second bill, introduced at the same time, merely codifies the existing acts of Parliament.

The Lettsomian Lectures at the Medical Society of London were delivered by Dr. Langdon Down, the senior physician to the London Hospital. He took for his subject the mental affections of childhood and youth, and brought out many facts of much general interest. Dr. Down reiterated his opinion that the congenital idiots of the more highly developed races often resemble, in their facial configuration at least, certain of the races which occupy a lower step in the scale of civilization; that they have, for instance, resemblance to the Malays, Mongols, or Negroes. He considers that the observation of this resemblance will be of great use in making a correct diagnosis and prognosis. As a working classification, he divides cases of idiocy into the congenital, the developmental, and the accidental. In determining whether a case is to be referred to the first class or one of the others, he finds the "ethnic" peculiarities of great value, since, on the whole, the congenital cases give the best results and can be educated up to a certain point, whereas the accidental cases are most disappointing, though the prognosis at the first glance appears so much better. He has found that an instrumental labor has far less influence than a prolonged labor in producing feeble-mindedness, and that neither consanguinity nor disparity in the ages of the parents has any influence, while hereditary weakness is most powerful. Some good examples of "idiots savants" were well worth hearing, and will be not only instructive reading, but interesting and here and there amusing, when they are published in full.

Professor Greenfield, of Edinburgh, recently, in a very obscure case of acute brain-mischief, with perforation of the tympanic membrane on one side, diagnosticated an abscess in the anterior part of the sphenoidal lobe; at his request Mr. Caird trephined in the temporal region, found the dura mater tense, with absence of pulsation, lymph beneath the dura mater, and, finally, after passing a Graefe's knife directly inward for at least an inch, he hit upon the abscess and evacuated two ounces of fetid pus, using a pair of drainage-forceps to enlarge the wound; a drainage-tube was introduced and the wound dressed antiseptically. The patient, a young man, aged 26, had made notable improvement in twenty-four hours, and was almost quite well in a fortnight. On the same side as the abscess there was well-marked optic neuritis, which rapidly diminished after the operation, so that at the end of twenty-five days Dr. Argyll Robertson, who then examined the eye, could only say that the disk was a little pale and flat and not quite sharply defined at the margins.

A discussion on the diagnosis and treatment of cerebral abscess took place at the Glasgow Medico-Chirurgical Society on February 11 and 12, but does not appear to have added much to current knowledge. Dr. William MacEwen mentioned a case of abscess in the temporo-sphenoidal lobe upon which he had operated with success. Mr. Barker, who had another successful case (with Dr. Gowers) about three months ago, is reported to have stated that nearly all intra-cranial abscesses originating in ear-disease were in the cerebrum, and that nine-tenths of the cerebral abscesses were in the temporo-sphenoidal lobe. Such abscesses, though not very commonly met with, are not extremely rare: for instance, Professor Greenfield said he met with about one case a year in the Edinburgh Infirmary, and Dr. Coats said that the number in Glasgow was proportionate, so that probably this operation, which appears to present no serious difficulties to the surgeon, will soon become comparatively frequent,—more especially as the first five cases (treated by Barker and Gowers, Schondorff, Trückenbrod, Greenfield, and MacEwen) have been so successful. Altogether, there seem to have been twenty cases recently in which the cerebrum has been incised or partially excised, with three deaths, two from shock and one from septicæmia.

In a discussion on renal surgery which has recently occupied the attention of the Clinical Society for two nights, much prominence was given to the difficulty of diagnosis. Mr. Bennett, of St. George's Hospital, related a case in which a tumor in the renal region was freely laid open through the loin, and the finger entered what was apparently a disorganized kidney. The patient died of lung-disease six weeks later, when the wound was almost closed, and it was found that the kidney was quite intact and that the cavity opened was an abscess. Mr. Knowsly Thornton, who advocates an exploratory abdominal incision to allow both kidneys to be examined, and then a lumbar incision for the removal of the stone and for drainage, mentioned one case where, owing to the patient being stout, it was even then difficult to feel the stone. Mr. Bruce Clarke mentioned a case of abdominal aneurism closely resembling renal disease, and several speakers referred to the additional difficulty created by the frequent reference of pain or colic to the opposite side.

The Hunterian Oration at the College of

Surgeons attracted the usual large audience, and Mr. Savory, the President, discoursed with more than usual eloquence on Hunter and his share in the foundation of a scientific system of surgery.

The homœopaths have scored their first important victory in London. There has been for many years a small infirmary for consumption in Margaret Street. It would seem that attention has recently been drawn to the fact that two of the physicians practised homœopathy. A meeting of the governors was held, and a resolution was proposed inviting these two members of the staff either to resign, or the one to remove his name from the Homœopathic Directory and the other to sever his connection with the Homœopathic Hospital. An amendment in an opposite sense was moved and carried by twenty against seventeen. The two consulting physicians, the surgeon, and four out of seven of the acting physicians have resigned. It is stated that the amendment was carried by the aid of the votes of governors who have only qualified within the last few months, and that the majority of the Executive Committee will resign.

The quarrel at the Liverpool Hospital for Women has ended, for the present at any rate, Dr. Imlach, the member of the staff who had performed the operation of "removal of the uterine appendages" so frequently, having failed to secure his re-election at the recent annual meeting of the "subscribers, donors, governors, and friends" of the hospital. Both sides had been active in obtaining proxy votes, but Dr. Imlach only obtained one hundred and thirty-seven proxies in his favor, while the proxies on the other side numbered three hundred and twelve. The voting of persons present at the meeting was more even, sixteen voting for and seventeen against Dr. Imlach.

A fund is being raised to perpetuate the memory of the late Dr. Walter Moxon; it is intended to place a memorial of him in Guy's Hospital, and to found a scholarship or medal to be awarded by the Royal College of Physicians.

Auvard's incubator has lately been used in the Glasgow Maternity Hospital in the case of three children (triplets) born at about the sixth month, or between that and the seventh; one died on the first day, another on the sixth, but the third survived and left the hospital with its mother, and has since continued to thrive. Though thus partially successful in this case, the apparatus appears to have been found very faulty in construction and inconvenient to work. Another apparatus, designed by a firm (Hearson) who manufacture chicken-incubators, was exhibited before the Medical Society here some years ago, and, as far as could be judged, was free from the chief objections to the French apparatus, which is simple but clumsy.

Total abstainers, not satisfied with having induced several life-insurance companies to institute a special section for them, started a Blue-Ribbon Company three years ago. The company pays a dividend of five per cent. this year, and the persons insured in the total abstinence sections of the other companies receive larger bonuses than the drinkers of alcohol.

Of the various schemes for providing London students with a degree on easier terms than at present, the one which appears to be making most progress is that of the College of Physicians and Surgeons. It is reported that the delegates of the two colleges meeting together have already begun the discussion of the charter which is to be obtained for the "University of Westminster." The committee of the Senate of the University of London appointed on Lord-Justice Fry's motion have agreed to a report recommending certain alterations in the constitution of the University, intended to give the teachers more power and to make the regulations more elastic; it will shortly be discussed by the Senate, and if adopted, as is said to be probable, there can be no doubt that the University will get a new charter. In that case we shall probably hear no more of the scheme about to be floated by University College: this is to obtain a charter for "an academical body in London, of which University College shall be the first constituent, such charter to give the right of conferring degrees in arts and science only." The last clause is no doubt directed to disarm the opposition of the medical schools. The scheme, as will be observed, would work in very well with the "University of Westminster" scheme.

The General Medical Council is in session, and the new members are beginning at once to make their voices heard. The Colleges of Physicians and Surgeons in Ireland had entered into the preliminary arrangements for constituting a conjoint board upon the same lines as the conjoint board in England, and it had been arranged that application should be made to the General Medical Council to sanction the scheme. The Apothecaries' Hall in Dublin objected to being left out in the cold, and it is understood that their representations have so influenced the College of Surgeons that the latter body is anxious to modify the scheme. The College of Physicians, however, will have nothing to do with the Apothecaries, and though the General Medical Council, when the matter came before it, passed a resolution "requesting" the College of Physicians to reconsider its decision, the probability seems to be that it will remain obdurate. The most curious fact is that the Council finds that it has no power to forbid the banns if any two corporate bodies choose to enter into combination: so that it would appear to be quite within the power of the College of Surgeons to combine with the

Apothecaries' Hall and leave the College of Physicians stranded,—a consummation devoutly to be deprecated.

Dr. Lutaud, the editor of the *Journal de Médecine* (Paris), has recently been in London, collecting evidence as to the cause of death in the patients of Pasteur who have died in England. He believes that altogether ten persons have recently died of "paralytic rabies" communicated to them by Pasteur's inoculation, and has, I hear, a volume in press designed to establish this contention.

The Rev. Dr. Dallinger, F.R.S., who has been again elected President of the Royal Microscopical Society, gave an account of some very curious experiments he has been making for the last seven years on micro-organisms. He began by growing certain moulds at a temperature of 60° F.; by very gradual stages he raised the temperature and noted the effect. When, after four months, he reached 73° F., the organisms began to show that their vitality was becoming depressed; after being kept at 73° F., however, for two months, they regained their vigor; and then by slow degrees the temperature was raised to 78° F. in five months more, when another pause became necessary. By continuing the experiment on these lines he finally reached the temperature of 158° F., at which the organisms were growing when an accident put an end to the research. The organisms which had been thus acclimated to 158° F. could not live at 60° F.

The fifteenth report of the Medical Officer to the Local Government Board contains much that is of interest to epidemiologists and pathologists. In a previous letter I have mentioned the epidemic of scarlet fever in London, which was conclusively shown to stand in some direct connection with a dairy-farm at Hendon, in Middlesex, and was believed, on grounds which amounted to a strong probability, to have been due to the prevalence of sore udders among the cows. There can now be no doubt that the sore udders were in reality the cutaneous lesions of an epizootic disease easily communicable by the discharges from the ulcers. Dr. Klein, F.R.S., has isolated a streptococcus from the ulcers on the udders, and, by inoculating calves with it, has produced in them a disease which, in the changes noted in the skin and kidneys, closely resembled human scarlet fever. Finally, from the blood of ordinary human scarlet fever Dr. Klein has succeeded in isolating a micro-organism which he considers to be identical with that obtained from the Hendon cow-disease.

The result of the researches of Mr. Power and Dr. Klein, while profoundly disquieting in one respect, ought to be of great use in another, for the local disease in cows, though apparently unaccompanied by any serious constitutional disturbance, could easily be recognized. The management of a dairy-farm is becoming more and more every day a matter of science. Dr. Klein's researches will probably meet with the more extensive acceptance, even from those who are accustomed to sneer at "germs," because they are entirely confirmatory of the theory started by Mr. Power on totally different grounds,—that is to say, after a judicial sifting of the evidence of the persons engaged on the dairy-farm and in the retail distribution of the milk.

Certain writers have striven to draw a distinction between what they call "bacillary tuberculosis" and "non-bacillary tuberculosis." The difficulty of discovering the bacillus in the tissues is often very great. It was early pointed out by Dr. Koch himself, and everybody who has worked at the subject has encountered the same difficulties; everybody, however, found that the disease could be produced by inoculation of material in which the bacilli were, to say the least, extremely difficult to discover. Dr. Klein and Mr. Lingan report a few experiments on this point. Certain sections were stained with care and the absence of bacilli established; other sections made at the same time—contiguous sections in fact—were used for inoculating guinea-pigs; the guinea-pigs became tuberculous and the lesions contained the bacilli. It follows, therefore, either that the bacilli or their spores were present in the original tissue in some unattainable and undemonstrable condition, as is the more probable, or that the inoculation of the tubercular material set up a process in the tissues favorable to the development of the bacillus, which it would in this case be necessary to assume must have found its way to the site of the lesion through the channel of the vascular system, just in the way the yellow coccus of pus must be assumed to reach a commencing focus of inflammation.

DAWSON WILLIAMS.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA ACADEMY OF SURGERY.

MEETING OF FEBRUARY 7, 1887.

(Continued from page 392.)

DR. CHARLES K. MILLS: My observations in regard to hydrophobia have been entirely clinical or clinico-pathological in character. About six years ago, in connection with Drs. Seiler and Collins, I read a paper before the County Medical Society, reporting some cases with hydrophobic symptoms. I have paid considerable attention to the cases of so-called hydrophobia occurring in man. The conclusion which I have reached is that nineteen out of twenty of the cases which are supposed to be hydrophobia, as they occur in the human being in this city and as reported in the journals, can be easily ex-

plained upon some other hypothesis. This has only an indirect bearing upon the study of the question of the status of Pasteur's researches.

Dr. H. C. Wood: We have heard much discussion as to the question whether the virus is that of rabies, and whether there is such a disease as rabies. This seems to me of comparatively trifling importance. The facts brought before us by Dr. Ernst seem to establish a principle which may, in the future, entirely change our present methods of therapeutics. It is perfectly plain that when we give a man the vaccine disease we produce a disease which is followed by certain changes in the system which are supposed to be identical with those produced by ordinary smallpox, and therefore the man is protected from smallpox. But in the cases of the experiments which have been given here to-night the thing is not this at all. We have an animal which has a disease,—whether it be rabies or not, it is some disease given to it,—and then the disease is cured by the inoculation of other masses of the disease-material of less virulence or potency. There has quite recently arisen in Southern Europe a school of therapeutists which teaches that we are to cure smallpox, scarlet fever, and certain other diseases by inoculation of the same disease. I confess that I have never thought the matter worth investigation; but we are now in the presence of positive and scientific evidence that we can cure disease by inoculating with an attenuation of the poison.

I think myself that the common idea that a disease does not begin until we have its symptoms is a false one. The process is going on during the period of incubation, and the disease commences, I think, so soon as the system is inoculated with the poison. The stage of incubation is simply the stage in which there are no symptoms. It seems, if the statements of Dr. Ernst be accurate, that it is possible to cure bacterial disease by the inoculation of the same poison, and the outlook for the future is that the time may come when this will be the treatment of every one of our acute zymotic disorders.

Dr. J. Ewing Mears: Before Dr. Ernst is called upon to close the discussion, it seems to me proper to say that we are under the greatest obligations to him for coming to our city and presenting to us the results of his investigations. I am informed that these experiments have been made at the instance of the authorities of the Harvard Medical School. We are therefore under great obligations both to Dr. Ernst and to the Harvard University.

With regard to the subject so ably presented to-night, I think I can speak for every true surgeon in saying that, while we have much to do with it, we are in a condition of receptivity; we are waiting for these investigations to be carried to such a point and for the results to be so determined that the practical surgeon can take the material which may be finally isolated, and which can be used in the same manner as we use the vaccine virus to-day. That the time will come I have no doubt. It may take some years; but that the outcome of all this scientific work will be the advancement of surgical knowledge and of the art of surgery there can be no question.

That we should not accept without discussion the results of these experiments is perfectly natural. I think there is reason for objections, for the results of investigations by Pasteur, upon this subject,—not such as those made by Dr. Ernst, and by others, but in the gleaning of all the results which have been presented in the journals and in other ways. It may be well that there should be some one, and probably more than one, who will act as checks upon the enthusiasm of experimenters. The objections to-night will possibly be received as suggestions by Dr. Ernst and other investigators, and will stimulate them to avoid error. It may not be familiar to all present, but it is stated that the College of Physicians of this city nearly one hundred years ago failed to approve the nomination of Jenner as an honorary member of that institution. The originator of vaccination, who has probably done as much to save life as any man, and who has placed the whole human race under obligations to him, was evidently not deemed worthy of Honorary Fellowship by the few members who then constituted the College of Physicians. They thought, no doubt, little of his work, and considered his results fallacious. This was natural: it is in accordance with what we see to-day. These investigations are progressing, and the objections, the unbelief, the suspicions, if you choose, which are constantly suggested with regard to them will do good. I think that our friend Dr. Ernst will be gratified with the instructive discussion of his able and interesting paper.

Dr. Harold C. Ernst, who closed the discussion, presented a rabbit suffering with rabies, which he had inoculated ten days ago. He also exhibited the trephines which he uses in making inoculations under the dura mater. Dr. Ernst then said,—

Dr. Shakespeare has spoken of the change in the intensity of the opisthotonos. That, too, I have seen, and I think that it is included in the description which I have given of the symptoms. I have never seen opisthotonos cease entirely. With reference to the question of tetanus, very curiously the same thing happened to me. One of the dogs which I had inoculated died, and, by the carelessness of the janitor, was not immediately placed on ice. Material from this dog was used the next day to inoculate three dogs and two rabbits; they all died the following day with intense opisthotonos. I inoculated other animals, and they also died within

thirty-six hours. Upon momentary inspection the symptoms might be thought to resemble those of rabies, but the period of incubation was almost nothing, the animals dying within thirty-six hours. I at once recognized that I had an eruption of tetanus. My time was so occupied that I was unable to make special investigations upon this matter. The only way in which I can explain it is that the dog had undergone some putrefactive changes before being used for inoculation.

Dr. Dulles has made a number of criticisms upon my paper. He is good enough to say that there are certain points which he thinks I have proved, but when he sat down I was at a loss to find that I had proved anything. He makes a point that Pasteur asserts that his animals die on the seventh day. I think that Pasteur asserts that the symptoms appear on the seventh day; but this is a small point. With reference to the variation of the period of incubation, he makes it a point that one of the rabbits which I received was inoculated June 14 and died June 28. It must be remembered that that animal was taken on a sea-voyage; it might have been sea-sick. The other was inoculated June 21 and died July 4. These rabbits were of a different species from those we have here. The variation in the period of incubation might have been due to change in the surroundings, to change of temperature, and change of the conditions under which they were kept.

With regard to averages, if Dr. Dulles misunderstood me so far after having had an opportunity of examining these tables, I am unable to help it. The longest period of incubation was twenty-three days, and that was only in one case. I mentioned that, because, in an investigation of this kind, I think that it is absolutely necessary that every experiment be given, and then a candid critic can draw his own conclusions. There was only one case in which the period of incubation was three days. In the large majority of cases it was from twelve to seven days. In most of the cases the appearance of the symptoms was from seven to eight days, precisely what Pasteur states that it is. These averages are drawn from thirty-two cases. The same is true with regard to the other averages.

In regard to my statement with reference to the place Pasteur got his virus, the sentence in which this is mentioned is clumsily constructed; but I think if attention be given it will be seen that the idea I meant to convey was that Pasteur commenced his experiments on hydrophobia with the virus from the child who died of supposed hydrophobia, not that he began his protective inoculations with that virus.

In regard to the criticism that it is necessary to make a large number of subdural inoculations with other bacteria in order to prove that this is a specific virus, and that other bacteria will not produce these symptoms, I must say that I think this unnecessary for the very reason of the success of the experiments of the kind that I have detailed, especially those upon guinea-pigs. This is the most striking series of experiments of which I have any personal knowledge.

I am ready to agree with Dr. Dulles that Pasteur's statements do vary sometimes, and I do not wonder at it. He is pursued by investigators from all over the world, and a man occasionally says things in a hurry which may get into print. As the results of his experiments are from time to time tabulated for him, his opinions must change to some extent.

Here is the fact that in three hundred and fifty or four hundred inoculation experiments upon guinea-pigs made during the past few years, I have injected subcutaneously bacteria of all degrees of virulence from that of anthrax to the simple bacteria of suppuration or the ordinary bacteria of putrefaction, and I have obtained all sorts of results, but I have never seen anything which in the least resembled what was obtained in three out of ten of these guinea-pigs. There has never been anything that could be ascribed to the nerve-centres. That the application of these bacteria beneath the dura mater would have such an effect is not probable. It has been proved by these experiments that the healthy spinal cord so applied has no effect. My results correspond very closely with those of Pasteur in this respect. He states that thirty-three and one-third per cent. of the animals inoculated with the stronger virus die. I inoculated ten animals, of which three died and one had symptoms of paresis but recovered.

Dr. Dulles wishes to know how it is possible to have the virus ready at all times. This is perfectly easy. I have proved by experiment, and the rabbit exhibited to-night is a visible proof of this, that if the animal be properly frozen the virus will retain its strength for a period of at least six months. The rabbit before you was inoculated with the cord of a rabbit which was inoculated July 11, 1886, and died the latter part of the same month. It was frozen ever since until ten days ago. I have repeated this experiment a number of times. A large number of these experiments have been made with cords which have been kept frozen for periods ranging from two weeks to six months.

Dr. Dulles has laid great stress upon the large percentage of failures. My percentage has not been larger than in most experimental work. But I have given every animal that I have experimented upon, and have tried to explain the failures. He seems to think that this is a ground for refusing belief to Pasteur's results. It does not seem so to me. I have been working almost all the time by myself. I have not the large amount of money, and I have not many of the advantages, which Pas-

teur has. These things I have not the slightest doubt reduce his percentage of failures.

I began this work last summer as a sceptic, but I am now a firm believer in the truth of most of Pasteur's assertions.

There is still another point. Dr. Dulles wants to know how it is that we are certain that this virus is the poison of rabies. The experiments of Fritch prove this. He has inoculated rabbits, dogs, and guinea-pigs with so-called street-rabies, and has produced exactly the same symptoms as those produced by the virus obtained from Pasteur. He gives the confirmatory evidence which Pasteur's experiments have hitherto lacked.

In reply to Dr. Huidekoper, I would say that this is a series of sixteen successive inoculations.

In conclusion, I would say that I think that I voice the feeling of all experimenters when I say that criticisms of this kind are not justified unless they are backed by experimental evidence. Experimental research has in modern times come to such a point that a critic who undertakes to upset conclusions based upon hard work should offer hard experimental work in contra-evidence.

Adjourned.

JOINT MEETING OF THE PHILADELPHIA NEUROLOGICAL SOCIETY AND PHILADELPHIA MEDICAL JURISPRUDENCE SOCIETY.

JANUARY 24, 1887.

(Continued from page 390.)

DISCUSSION ON DR. DERCUM'S PAPER.

DR. THOMAS G. MORTON sent a note stating that he had been compelled to leave the meeting, and requested that the following letter be read, which he had received from Dr. Longstreth, Pathologist to the Pennsylvania Hospital:

"*Dear Doctor*,—In connection with the subject on which we were speaking,—the criminal insane brain,—let us remark, in the first place, that the examination of the brain of a person strangulated is a difficult one from which to draw accurate conclusions in respect to any of the more minute conditions, as well as in its gross aspects. Strangulation fills the brain with blood and serum, and makes it larger or heavier. These facts are well supported by authorities, especially Caspar in cases of suicide. The more prolonged the act of strangulation, the more marked are the alterations due to this cause.

"In respect to almost every alteration of tissue of the brain of an insane person, the same or similar alterations have been found in the brains of those about whom there has been no suspicion of insanity.

"Of the relation between the general conformation of the brain and insanity, it is to be remarked that no two brains present the same conformation, and that the two halves of the same brain are not identical. In the malformed brains, irregularities or deficiencies of the cerebral convolutions have been pointed out as occurring in the insane and in criminals; but no definite relation has been shown to exist between any particular portion of the brain and any definite form of insanity: that is to say, the defect or malformation of a convolution or group of convolutions has not been shown in connection with homicidal mania, dementia, melancholia, or general paralysis.

"In those cases, found among the criminal classes in England, in which defective brains have been considered as the cause of the criminal characteristics, the deformity of the brain seems to have been in all cases a matter of inheritance, and the criminal has in all cases been found to be defective in other respects, either physically or mentally.

"Very truly yours,

"MORRIS LONGSTRETH."

Dr. PARKER: I have had some experience in the examination of the brains of criminals, and I must say that the brain of Wilson was an exceptional one. The highly-developed superior external *pli de passage*, almost obliterating the parieto-occipital fissure in one hemisphere, makes it one of the most remarkable brains that I have ever seen. This brain was abnormally large, weighing, I believe, nearly fifty-eight ounces. The brain had grown excessively, and the walls of the skull were very thin. We have also transverse fissures running all the way through the hemisphere, cutting off the first, second, and third frontal convolutions, so that the precentral fissure is separated from the rest of the hemisphere. We also find a tendency to the formation of perpendicular fissures. This is a brain that has developed under pressure. The skull has not developed rapidly enough to permit of the normal development of the brain.

Dr. WILLIAM OSLER: We have had very definite statements in the public press that the examination of the brain of this unfortunate individual showed conclusively that he was insane. It is very evident from Dr. Dercum's account that this brain is of a low type, but the morphological formation does not indicate that the man was insane. It is a brain such as may be found in a pauper, and such as we know is not infrequently met with in criminals.

The evidences in regard to inflammation are not clearly brought out. The thickening of the membranes did not appear to be extreme. The adhesions between the dura mater and the skull and the thickening of the pia between the sulci do not appear to have been more marked than we see in other instances of persons who have shown no signs of insanity.

I would like to ask an explanation of the differences between the published statement and that made to-night. It is extremely unfortunate that these erroneous statements find their way into the public press. I do not know whether or not Dr. Dercum was responsible for them. The impression entertained by the community is that from the examination of Wilson's brain it was clear that he was insane. No such evidence has been brought here to-night.

Dr. CHARLES K. MILLS: Physicians are frequently misunderstood with reference to questions relating to the examination of the brains of those alleged to be insane. I have examined a large number of the brains of persons who have been insane, criminals, and persons of a low order, as found in large hospitals. We find in these brains a large number of malformations, conditions of congenital defect, and conditions of arrested development from mechanical or other causes. We have not sufficient data yet to say that this is the brain of a murderer, or this the brain of a man with the delusion of marital infidelity or hallucination of hearing, because the third frontal convolution is a little too small, or a little crooked, or a little too straight. None of us say anything of this kind; but we say that in an increasing degree we are adding to the data with reference to appearances of this kind, which show that a large number of these brains have similar anatomical defects and aberrations, and that is about all.

This brain, from the statements of Dr. Dercum, was a highly-deformed brain so far as the morphological appearances are concerned. It represented the conflict going on between overgrowth and pressure. It was also a diseased brain: it was diseased in its membranes, it was diseased on its surface, and also down deep in its internal portions. That is all we can say, and that is all any of us do say.

Dr. H. C. WOOD: There is no one for whose opinion I hold a higher respect than that of Dr. Osler, and I can only think that he must have misunderstood Dr. Dercum. Dr. Dercum stated that the man had pachymeningitis; that he had meningitis involving the pia mater and the adjacent membrane; that he had vascular destruction of the interior of the brain; that he had enlargement of the periganglionic spaces; and that he had enlargement of the perivascular spaces. That certainly indicates disease of the brain, and is entirely sufficient to produce insanity. I do not say that that condition of the brain proves that the person from whom it was taken was insane. I do say that that is an insane brain, and is a straw of evidence in favor of insanity during life. We are not at present able to connect insanity during life with pathological changes. There are enough pathological changes in this brain to account for insanity if it existed during life.

Dr. FRANCIS X. DERCUM: Dr. Wood has already said what I had intended to say with reference to the pathological conditions present here.

I am glad of the opportunity of explaining what I know about the newspaper reports referred to. I was called upon by a young man, a reporter of the press, and I dictated to him four or five sentences with reference to the exact condition of the brain. During the conversation he asked me if this, that, or the other condition would indicate insanity; but the only publication which I authorized was what I dictated to him, and of this I revised the manuscript. I was as much surprised as were others when I found what had been published. What I authorized the reporter to state was that I had a diseased brain to describe, and stated in general terms the condition present.

Dr. LEVICK: There is in the University Museum a bony cyst, the size of a hen's egg, which was removed from the brain of a young Frenchman who had committed almost every crime known. Many years of his life were spent in prison, and he narrowly escaped the guillotine. He was regarded as a criminal of the worst kind; but he was a good workman, and was not suspected to be insane. After his death this bony cyst, which had been pressing on the cortical structure for a long time, was found. I merely mention this because it has become the custom to sneer at the plea of insanity. It is well to remember that morbid conditions may exist within the cranium which are not obvious, and which, if known, might render the verdict in a given case different.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held February 17, 1887, the President, A. JACOBI, M.D., in the chair.

THE PRESIDENT read an address in which, after referring to the reform of sanitary abuses brought about by organization among medical men, and pointing out certain other desired reforms, he spoke at considerable length on the subject of medical advertising in the way of reportorial puffs in the newspapers. Since his reference to this subject over a year ago, fewer reports of wonderful operations, etc., had appeared in the papers, but the abuse was being revived. A pretended interview with himself was cited, picturing the dangers which would arise from digging up the streets in burying telegraph-wires, and, although he wrote to the editor denying having been interviewed, his letter was thrown into the waste-basket. Doubtless in many other instances physicians had been misrepresented; and under any circumstances such reports could but injure the individual physician and the profession at large.

SPASTIC ATAXIA (OR ATAXIC PARAPLEGIA) AND THE COMBINED SCLEROSIS OF THE SPINAL CORD.

Dr. C. L. DANA read a paper on this subject based on an analysis of over one hundred cases of Friedreich's disease, cases of combined sclerosis with mania, and cases belonging properly to the subject of the paper. Of the entire number of cases analyzed, in forty-five an autopsy had been made; of this number only sixteen were selected as falling in the class under discussion. To this sixteen he added eight seen by himself, in only one of which (a case of Dr. Graeme Hammond) an autopsy had been made.

The name ataxic paraplegia was objected to; indeed, the author knew of no name which was without objection. We might substitute the term, based on the pathology, combined fascicular sclerosis, were it not that there seemed to be cases in which this sclerosis was present while the symptoms during life had been those of locomotor ataxia with flaccid paralysis and not spasm.

Dr. Dana thought that most of the cases described as spastic paraplegia were apparently cases of tabes dorsalis upon which there had been added a disease of the lateral columns, especially of the pyramidal tracts, often of the direct cerebellar tracts. In his own experience, it did not seem possible always to draw the line between the cases in which the spastic symptoms predominated and those in which the sensory and paralytic symptoms predominated. He would divide the cases into those in which the background was a sensory one, resembling locomotor ataxia of a mild grade; second, those in which the fundamental features were spasm and paralysis, with ataxia superadded.

The following facts were drawn from his own cases and the sixteen in which autopsies had been made. Syphilis was rare, not amounting to more than five per cent.; heredity was an important fact; spastic ataxia even showed a family type. In cases occurring in early life, sexual and alcoholic excesses had been noted; in cases in which it occurred later in life it was due to hard physical strain and exposure. The disease begins usually with ataxia; then stiffness in the legs and trembling are noticed; sexual power early declines; then there appear temporary vesical disorders, generally retention or slowness in emptying the bladder. There also occur a feeling of numbness and pains of a fulminating character which do not last long. Patches of anæsthesia often go away under treatment. The muscle-sense is often good. Gastric and enteric crises are absent. The muscular spasm usually involves the lower extremities, but sometimes the arms. The gait is a combination of that of tabes and spastic paraplegia. The lesion is usually a sclerosis or degeneration of the long system-tracts in the cord,—namely, the direct cerebellar and pyramidal tracts and the columns of Goll,—but it might extend outward laterally, and the degree of involvement at different levels is not uniform. The part usually most affected is the upper dorsal.

Dr. M. ALLAN STARR agreed with Dr. Dana with regard to the difficulty of selecting a name, and thought the one offered by the author was open to the same criticism that he had made upon the name proposed by Gowers, and which Gowers had admitted to be bad. The pathological name, combined fascicular sclerosis, was objectionable because the sclerosis was not exclusively fascicular. The paper was a valuable one, yet he thought the picture of combined sclerosis of the cord was rather hazy. The pathological findings in Dr. Hammond's case were not those of combined fascicular sclerosis.

Dr. G. W. JACOBY thought we were working very much in the dark in trying to make a classification of cases from a clinical standpoint.

The same view was expressed by Dr. Birdsall and Dr. Brill, who thought that essentially the same lesion might give rise to different symptoms, according to the fibre-tracts involved in the cord. Dr. Seguin related a case with symptoms which would justify classing it among the cases referred to by Dr. Dana, and in which the lesion showed the gross appearances of sclerosis of the posterior and lateral columns, but the microscope showed that the lesion extended to the extreme lateral portions of the spinal cord, and was rather irregular at different levels. The President suggested that the irregular distribution of the lesion might be explained by its following the course of the very fine blood-vessels, as had been supposed some years ago by a German writer.

Dr. DANA said the clinical history of Dr. Hammond's case was typical of the class referred to; the lesions, however, illustrated irregular distribution.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, FEBRUARY 28, 1887.

The President, LAURENCE JOHNSON, M.D., in the chair.

THE DURATION OF THE SYPHILOGENIC CAPACITY IN RELATION TO MARRIAGE.

THE following were some of the conclusions at which Dr. MORROW arrived: 1. The facts of every-day observation showed that there was nothing constant in the contagion, nothing certain in the heredity of syphilis. Men sometimes married during the full activity of secondary syphilis and did not infect their wives nor transmit the disease to their offspring. But these negative observa-

tions were entirely valueless compared with the positive. 2. The passage of syphilis from the second to the tertiary stage, based on the anatomical appearance of the lesions, did not furnish sufficient criterion of the contagiousness or non-contagiousness of these lesions. 3. Clinical experience showed that late lesions were exceptionally, but none the less certainly, the source of the contagion. 4. While in the immense majority of cases the contagiousness of syphilis and its power of transmission ceased after the third or fourth year, yet there were well-authenticated observations to prove that these qualities sometimes continued much longer, and might be manifest the fifth or sixth year, or later. 5. The power of syphilitic parents to procreate diseased children might persist after the disappearance of symptoms. 6. The precise date in the evolution of the diathesis when the syphilitic organism underwent that change which marked the limit of transmissive power was not indicated with mathematical certainty. 7. The type of syphilis, the duration of its manifestations, the constitutional peculiarity of the patient, the character of the treatment, the presence or absence of certain conditions which were commonly recognized as factors in the gravity of syphilis, all exerted a modifying influence. 8. All these elements should be taken into consideration in deciding on the propriety of a syphilitic man's marrying. 9. Direct transmission from the father to the offspring, without the mother's becoming affected, could be classed among established facts.

Dr. Morrow referred to a paper by Dr. Otis, and said that he thought the conditions of admissibility to marriage formulated by Fournier were much broader and safer to follow. Indeed, the object of the paper was largely to prevent the evils which would result to the community should Dr. Otis's views be commonly accepted.

Dr. F. N. Otis had time to read but a part of a lengthy reply which he had prepared, knowing about what ground the paper would cover. He claimed that the inferences drawn from his paper by Dr. Morrow were not justifiable, for while he (Dr. Otis) had stated that his observation and that of others warranted the view that there was little danger of infection or transmission of syphilis after about the third year, yet he did not mean to license unrestricted liberty after that period. He held, however, that the reported cases of inoculation or transmission of syphilis after the fourth or sixth year, or later, were not only very few in number, but were unreliable, as other sources of contagion had not been excluded.

Dr. Otis believed that there were really only two stages of syphilis,—the infectious and the non-infectious. The first was characterized by cell-proliferation, the second by cell-destruction. Strictly speaking, the second stage was not syphilis; it was the sequelæ of syphilis, just as scarlet fever might have sequelæ after its infection had long disappeared. All authors admitted that syphilis did cease to be infectious or hereditary; it was only a question as to length of time. Few would refuse to give permission to matrimony after the fourth year; there were many who in certain cases would give it after the third year.

Dr. R. W. Taylor would be unwilling to be inoculated by lesions of syphilis, apparently secondary, although they did not occur until after the fifth or sixth year. But the contagious and hereditary property of the disease depended much upon circumstances, particularly upon treatment. If he could treat the patients from the appearance of secondary lesions to the end of the second year or second year and a half, he would be willing to risk that ninety-nine out of one hundred then marrying would escape affecting the wife or child. The virulence of syphilitic contagion gradually diminished: its exact duration could not be marked with mathematical certainty; it varied in different cases. He would not give his consent to a syphilitic's marrying before the end of two years. But if circumstances compelled marriage, he advised the prevention of conception and the employment of all safeguards against infecting the wife as long as the contagious element continued.

Dr. Bronson said the mother of a syphilitic child, the father having also syphilis, might be without lesions and still have syphilis. This was shown by the fact that the diseased child could not infect the mother, while it would a nurse.

ON THE SUPPOSED VIRUS OF CHANCROID.

Dr. F. R. Sturgis read the paper, in which he cited a number of experiments going to prove the position which he accepted,—namely, that there was no virus of chancroid. It was the result of an acute inflammation; its source, while frequently from another chancroid during venery, might also be from irritation in any other wound. Gonorrhœal pus, for instance, had given rise to the chancroid when applied to an abrasion or sore, and this chancroid was capable of auto-inoculation like any other chancroid. But its auto-inoculative property was usually less tenacious.

Dr. R. W. Taylor said the views of Dr. Sturgis to-day were those which Dr. Bumstead held almost alone in 1876. Dr. Taylor, however, having arrived at the same conclusions by independent investigation. He was glad to see that Dr. Sturgis had come over.

Dr. Otis accepted the views of the author of the paper.

Dr. Sturgis was not willing to admit having changed his views, but said that his paper this evening was only a continuation of an

article which he had published in the "Encyclopædia."

The special committee appointed to investigate certain charges against the Board of Health contained in the President's annual address reported that certificates of death had sometimes been returned requiring unnecessary changes. The sanitary superintendent, they thought, should have discretionary power to return certificates for correction or alteration, but it should be by special messenger or under seal, and not by word to the undertaker, to be delivered to the friends of the deceased, and by them to the physician.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held February 23, 1887, the President, T. MITCHELL PRUDDEN, M.D., in the chair.

PISTOL-SHOT WOUND OF THE BRAIN.

Dr. W. H. PORTER presented the brain of a man who had shot himself in the temple with a pistol of about .32 calibre. The ball passed directly through and out at the other temple, dividing in its course both middle cerebral arteries and breaking both orbital plates.

SURGICAL LIVER AND KIDNEY.

Dr. PORTER also presented the organs of a woman, aged about 22, who died about a week after laparotomy and removal of a hæmatoma by Dr. Emmet. The patient did well for five days after the operation, but the urine, which had previously been normal, showed increasing albumen and casts and specific gravity. Bad symptoms set in on the fifth day, ending fatally. The autopsy showed the wound in good condition, except a slight amount of suppuration along the sutures. There were no signs of peritonitis. There was extensive parenchymatous and fatty change in the liver, with some cirrhosis; a less degree of parenchymatous metamorphosis in the kidneys, and still less degenerative change in the heart. Dr. Porter thought the primary lesion leading to death was in the liver, that in the kidneys being secondary, and due to the poisonous elements thrown upon them from imperfect function in the liver and to want of nutrition. In a number of cases in which such changes had been found after anæsthesia for a surgical operation, there was no pus whatever in the operation-wound.

PRIMARY LESION IN THE RIGHT SIDE OF THE HEART.

Dr. PORTER also presented a heart removed from a man who had a history of rheumatism, jugular pulsation, a mitral and a tricuspid regurgitant murmur, and œdema. The specimen was interesting from the fact that it was rare to find the primary lesion upon the right side of the heart, as it seemed to be in this case. The right auricle was largely dilated; the ventricle was very small; there was tricuspid insufficiency; the mitral valves also showed marked insufficiency; there was also marked perihepatitis and patches of cirrhosis.

BILIARY CALCULI.

Dr. PORTER also presented the liver and a large blood-clot removed from the body of a woman, aged 32 years, who had always been healthy except at times during the past eight or ten years, when she suffered severe pain in the region of the liver. When admitted to the hospital she was jaundiced, had high temperature, and some tenderness in the abdominal region. General physical examination was negative. An hepatic abscess being suspected, aspiration was performed without result. Albumen and casts appeared in the urine the last few days of life.

The post-mortem examination showed numerous gall-stones in the gall-bladder and throughout the liver, eighty-six having been counted; the common duct was pervious, and all the ducts and gall-bladder were dilated. Dr. Porter thought it likely there had been a stone which oscillated back and forth in the common duct, obstructing the flow of bile, but which escaped unknown. He thought the stones had probably formed in the gall-bladder and backed up into the liver. An interesting feature in the case was the fact that capillary hemorrhage had occurred along the line of the aspirating needle, and within the peritoneum, between the liver and the diaphragm, there was a large blood-clot. The kidneys had undergone parenchymatous change, and there was endometritis and cystic degeneration of the ovaries. There was extensive parenchymatous and granular destruction of the liver, and slight cirrhosis. The heart-muscle was fatty.

EXSECTION OF THE HEAD OF THE FEMUR.

Dr. L. H. SAYRE presented the head of the femur removed from a boy, aged 13 years. His family history was good, and his health had been good, but he had, as his sister stated, always walked as if on a wooden leg. Three years ago he fell, and two years ago his lameness increased, but he was again able to walk as well as ever until about six weeks ago, when there was pain in the hip. Dr. Sayre thought it probable there was disease of the acetabulum. Lately deep-seated fluctuation was discovered over the enlarged gluteal region, and an exploratory excision gave exit to about four ounces of pus. No débris being in the pus, and there being no crepitation, it was a question whether to go on and excise the joint. Some gelatinous matter was extruded on manipulation, when it was decided to excise the joint. The ligamentum teres was gone, the acetabulum was perforated to the internal periosteum, the head of

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Antimonii et Potass. Tart. . . 1–100 gr.
Med. prop.—Expectorant, Alterative.

Arsenici Iodidi . . . . . 1–100 gr.
Med. prop.—Alterative.

Belladonnæ Fol. . . . . . 1–20 gr.
Med. prop.—Narcotic, Diaphoretic, Diuretic.

Calomel . . . . . 1–20 gr.
Med. prop.—Alterative, Purgative.

DOSE.—One to two every hour. Two Parvules of Calomel, taken every hour, until five or six doses are administered (which will comprise but half a grain), produce an activity of the liver which will be followed by bilious dejections and beneficial effects that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

Camphoræ . . . . . 1–20 gr.
Med. prop.—Diaphoretic, Carminative.

Cantharidis . . . . . 1–50 gr.
Med. prop.—Diuretic, Stimulant.

Capsici . . . . . 1–20 gr.
Med. prop.—Stimulant and Carminative.

Cathartic Comp. Officinal . . . 1–3 gr.
Med. prop.—Cathartic.

Cathartic Comp. Improved . . 1–3 gr.
Med. prop.—Cathartic.

Digitalis Fol. . . . . . 1–20 gr.
Med. prop.—Sedative, Narcotic, Diuretic.

Dover's Powder . . . . . 1–3 gr.
Med. prop.—Anodyne, Soporific.

Ergotinæ . . . . . 1–10 gr.
Med. prop.—Emmenagogue, Parturient.

Ferri Redacti . . . . . 1–10 gr.
Med. prop.—Tonic.

Gelsemini Rad. . . . . . 1–50 gr.
Med. prop.—Nervous and Arterial Sedative.

Hydrarg. Bi-Chlor. . . . . . 1–100 gr.
Med. prop.—Mercurial, Alterative.

Hydrarg. Iodid. . . . . . 1–20 gr.
Med. prop.—Alterative.

Hydrastin . . . . . 1–20 gr.
Med. prop.—Tonic, Astringent.

Iodoformi . . . . . 1–10 gr.
Med. prop.—Alterative.

Morphinæ Sulph. . . . . . 1–50 gr.
Med. prop.—Narcotic, Sedative.

Nucis Vomicæ . . . . . 1–50 gr.
Med. prop.—Tonic, Stimulant.

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Two Parvules of Podophyllin, administered three times a day, will re-establish and regulate the peristaltic action and relieve habitual constipation, add tone to the liver, and invigorate the digestive functions.

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The Publishers beg to announce that, beginning with the February number, they will publish a series of articles on

DISEASES OF THE HEART AND CIRCULATION

IN INFANCY AND ADOLESCENCE.

By John M. Keating, M.D., and William A. Edwards, M.D.

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the femur was perforated, the neck showed considerable disease. The patient was doing well since the operation.

ABSCESS OF THE LUNG SIMULATING EMPYEMA.

Dr. L. E. HOLT presented the lung of an infant, aged 3 weeks, which he first saw October 23, when it had been three days ill with pulmonary symptoms. Dr. Holt found signs of broncho-pneumonia in the lower lobe of the right lung. The temperature remained elevated to nearly 103° for eight days, and then fell. The changes at this time were similar, but more pronounced than at the first examination. He saw the child about ten days later, when he was informed that it had been doing well, and had gained flesh, but that the temperature had gone up the night before. There were now unquestionable signs of fluid over the lower lobe of the right lung, and to their astonishment the aspirator-needle withdrew pus, pointing to empyema. Three ounces were withdrawn. The line of flatness changed with change of position. The temperature fell, and continued down to about the second week, the child doing well. There was apparently little tendency to reaccumulation of fluid. The needle was again introduced, but only an ounce of pus could be withdrawn. Dr. Holt did not see the child again during life, but was told that three or four days later the temperature went up, and there was dyspnœa. The house-physician introduced the aspirator-needle at two places, but found no fluid. The autopsy showed the right lung occupying nearly the entire chest-cavity. In its lower lobe was a large fluctuating mass, found to contain four ounces of pus. No fluid in the pleural cavity. There were some patches of pneumonia in the upper lobe of the right lung. The lower lobe of the left lung was collapsed. The abscess-cavity seemed to be surrounded by dense fibrous tissue.

Dr. FRANK FERGUSON had recently found a similar abscess-cavity in the lower lobe of the lung of an adult. Close search showed that it communicated with a bronchial tube.

STRICTURE OF THE ŒSOPHAGUS.

Dr. FRANK FERGUSON presented the œsophagus of a child, aged 2 years, which had swallowed a small quantity of caustic potash about three months previously, and had since then been unable to retain anything on the stomach. Its condition did not permit of an operation when it entered the hospital. Nourishment was given by the rectum. The stricture was found on autopsy to be about midway of the length of the œsophagus, and scarcely admitted a match. The organs were anæmic.

THE death of M. Béclard, Dean of the Paris Faculty, and Professor of Physiology, at seventy-five years of age, has been announced.

REVIEWS AND BOOK NOTICES.

SŒUR JEANNE DES ANGES, SUPÉRIEURE DES URSULINES DE LOUDUN (XVII^e^ Siècle). Autobiographie d'une Hystérique possédée, d'après le Manuscrit inédit de la Bibliothèque de Tours. Annoté et publié par les Docteurs GABRIEL LEGUÉ et GILLES DE LA TOURETTE. Préface de M. le Professeur CHARCOT. Paris, 1886.

This is the latest of the publications of the *Progrès Médical* belonging to the Bibliothèque Diabolique, Collection Bourneville. In the public library of Tours is a book belonging to the middle of the seventeenth century, in manuscript, the title-page of which is (translated) as follows: "The Story of the Possession of Jeanne des Anges, Mother-Superior of the Ursuline Convent at Loudun." To extracts, which are evidently authentic, from the original diary and correspondence of Sœur Jeanne are added the reports of several investigations and trials, giving an insight into the workings of disordered physical and nervous organizations, which found expression in fancied supernatural possessions, and even in imaginary impregnation and suicidal impulse. The light which has been thrown upon the obscure manifestations of hysteria by Charcot enables us to understand the pathology of demoniac possession. Nowadays, instead of resorting to exorcism, we treat the physical disorder underlying it, as happily expressed by the poet Bunthorne: "All can be set right by calomel."

ON THE DISORDERS OF DIGESTION: THEIR CONSEQUENCES AND TREATMENT. By T. LAUDER BRUNTON, M.D., D.Sc., F.R.S., etc. London, Macmillan & Co., 1886. 8vo, pp. 389.

The Lettsomian Lectures on Disorders of Digestion, their Consequences and Treatment, delivered by the author in 1885, are the *pièce de résistance* in the volume before us, in which the author has included reprints of various articles upon allied subjects prepared and published by him at various times since January, 1873.

The author intends that these papers shall be read singly, at odd half-hours, rather than consecutively, since there is some unavoidable repetition, which, however, is justified by the importance of the lessons which they teach.

A MANUAL OF PRACTICAL THERAPEUTICS, CONSIDERED WITH REFERENCE TO ARTICLES OF THE MATERIA MEDICA. By EDWARD JOHN WARING, C.I.E., M.D., etc. Edited by DUDLEY W. BUXTON, M.D., etc. Fourth Edition. Philadelphia, P. Blakiston, Son & Co., 1886. Post 8vo, pp. 666.

Owing to physical disability, Dr. Waring secured the services of Dr. Dudley W. Bux-

ton, Assistant to the Professor of Medicine at the University College, London, as editor of the fourth edition of this well-known work on Therapeutics. By condensing and curtailing some of the old material, space has been found for notices of the principal new remedies which of late years have received professional endorsement. The work is alphabetically arranged; the articles are confined to the discussion of the definition, dosage, medical properties, and uses of the various drugs now employed in medicine, upon the basis of the British Pharmacopœia. American students will find it useful as an addition to their usual text-books, as it contains, in a form convenient for reference, an epitome of modern therapeutics.

NEW REMEDIES AND CLINICAL NOTES.

PRURITUS PUDENDI.—Parvin, in eczematous inflammation, recommends poultices and alkaline washes, followed by a powder of starch and oxide of zinc, or the subnitrate of bismuth, or an ointment of white precipitate. Constitutional treatment, a milk diet, and the use of Fowler's solution will be beneficial in most cases.

In ordinary pruritus hydrocyanic acid is one of the best applications to relieve the itching. Levrat recommends the following formula:

℞ Plumbi acetatis, 1 G.;
Acid. hydrocyanici dilut., 2 G.;
Aquæ, 20 G. M.

If excoriations exist, the following may be applied:

℞ Balsami Peruviani, 2 G.;
Ol. amygdalæ dulcis, 3 G.;
Acaciæ, 4 G.;
Aquæ rosæ, 15 G. M.

If the disease be parasitic in origin, a mixture of equal parts of sulphurous acid and glycerin may be applied, or a sulphur-bath taken. Finally, a six- to ten-per-cent. solution of cocaine muriate may be brushed over the irritated surface. Hot applications are sometimes very effective; others find more relief in ice-water compresses.—*College and Clinical Record.*

NAPHTHALIN AS A VERMIFUGE.—A Russian physician, Dr. Koriander, recommends naphthalin as a tænicide. To children of from one to three years from two to thirty grains, or to adults from twenty to ninety grains, daily, were given, in tapeworm, with successful results.

EXTRACT OF OPIUM FOR LOCAL USE.—The extract of opium, according to Dr. E. R. Squibb, is a convenient preparation for external or enepidermic anodyne application. It is to be moistened with water to a semi-liquid consistence, and spread very thinly upon oiled silk or adhesive plaster.—*Ephemeris*, January, 1887.

MISCELLANY.

PROGRESS OF CREMATION IN NEW YORK.—The most convincing sign which could be given of the interest felt in cremation in this country is given in the annual report of the New York Cremation Society. This Society owns the crematory at Fresh Pond, New York, and is the most successful of all the associations in this country. It has now one hundred and ninety members, of whom one hundred and thirty-two are active, and twenty-two have been added during the year. The company is out of debt, but needs money to carry on its work. On this point President William J. Flagg said, "During the year just ended we have more than held our own as to members and in resources. Aside from this, it has been a year of inactivity—call it a year of waiting, of waiting on events and developments—at the Fresh Pond Crematory. Our waiting is not yet ended, for the Cremation Company has had and still has its own troubles. Nevertheless, it has made a good record, having performed eighty-four incinerations during 1886, which compares well with that of any similar institution. If now it finds itself embarrassed for lack of reserved funds, and is obliged to ask for a moderate contribution in the form of a temporary loan from friends of the cause such as are here to-night, its prospects must not be thought discouraging. The company may well claim such trifling aid. Its managers have done their whole duty in digging their way up out of the material and financial ruin into which it tumbled so suddenly one day. The company now owns a crematory not elegant, but sufficient for all practical purposes, and is out of debt."

The amount of money needed was said to be two thousand five hundred dollars; the earnings of the crematory during the year were two thousand one hundred dollars.

In regard to the progress of the cremation idea Mr. Flagg said, "Cremation has gone quietly into operation without opposition or hinderance from any source, and without serious difficulty as to practical details. That an entire change in the customs of a people in the important and solemn matter of disposing of the dead should have been allowed in this way is certainly creditable to modern toleration. Considering that yet it is but a feeble minority that prefer to give their bodies to the element of fire to purify and consume, instead of giving them to foul the other three elements, we must admit that it is very generous of the majority to let us have our own way, which we trust will soon be the way of all."

ALEXANDER'S OPERATION.—Prof. Thomas A. Ashby, at the meeting of the Baltimore Academy of Medicine held February 1, 1887, read "A Contribution to the Study of the Operation of Shortening the Round Ligaments of the Uterus in Cases of Posterior Uterine Displacement, as originally performed by Dr. William Alexander, of Liverpool, in 1881." One case is reported in Dr. Ashby's paper, the result being a remarkable success. After considering the steps of the operation, he offers the following conclusions:

1st. The round ligaments are designed to hold the uterus in its axis in the pelvis and to draw the fundus of the organ towards the symphysis pubis. They have little, if any, sustaining power in preventing procidentia, except in extreme degrees of descent, where the organ has escaped external to the vulva. Posterior displacement of the uterus can only take place when the round ligaments have been relaxed or stretched by prolonged tension.

2d. Shortening the round ligaments is a practical method by which the uterus may be lifted into its normal axis, and be retained in position by a restoration of its normal supports.

3d. This operation is admissible in all cases of posterior displacement where the uterus is not fixed by adhesions, but perfectly movable in the pelvis, and where other methods of support are not of service.

4th. The operation can prove of little value in cases of procidentia, except when employed in conjunction with other methods instituted to overcome this form of displacement.

5th. The operation can be easily performed by one who is familiar with the anatomy of the parts. It is almost devoid of danger if ordinary safeguards are employed.

6th. In the class of cases to which it is limited, the benefits secured are striking and important.

LEGISLATION NEEDED TO PREVENT RAILROAD MISMANAGEMENT AFFECTING FOOD-SUPPLY.—The transportation of cattle is one of the questions which should concern the philanthropic and which ought to receive the attention of State Legislatures. The recent severe weather in the West has delayed railroad-trains greatly, and one of the most serious results of the storm is the loss of cattle coming from Texas to Chicago.

There have been many deaths which have been attributed to the bitter cold. It appears, however, that many of the cattle have had no food or water during their transportation, and a delay of only twelve hours might cause great mortality, even if there had been no storm at all.

It is barbarous to crowd cattle into small, poorly-ventilated cars, and then leave them without food and water for a period of from twenty-four to seventy-two hours. It is no wonder that many died when the trip was a little longer than was expected. It seems strange that cattle-owners should be willing to take the risk of loss, even if no sentiments of humanity prompted them to take care of their cattle. Yet such is the case, and perhaps nothing can be done until the Legislatures step in and require owners, under heavy penalties, to supply proper food and water for cattle while being transported. Such legislation would be as popular as it would be beneficial.

RESTRICTIONS UPON THE SALE OF ALCOHOLIC LIQUORS.—According to the statements of the Attorney-General of Kansas in his recent report to the Governor of that State, prohibition is a great and acknowledged success. The only drawback is that the drug-stores have taken the place largely of the saloons, and now retail liquor in much the same way that the saloons did. The law which permitted the drug-stores to sell liquor is a necessary one, and yet some way must be devised to keep the druggists within bounds. The Attorney-General asks to have the laws made more stringent, and suggests that the druggists be obliged to state under oath that the persons applying for liquor were known to them. The applicant must also sign his proper name instead of a fictitious one.

The principal piece of temperance legislation recently has been the decision of the Supreme Court of Ohio that the Dow tax-law is constitutional. This law places a tax ranging from two hundred dollars upward on all saloons, and will no doubt considerably reduce the number of saloons, while at the same time it brings in a large revenue to the State.

DEATH FROM BROMIDE OF POTASSIUM.—Eigner reports in the *Wiener Med. Presse* a death from chronic bromism. The patient was a girl, 19 years of age, who became epileptic at the age of six, in consequence of fright. She had taken bromide of potassium without medical advice for about a year, beginning with a small dose, but increasing it rapidly until, for some weeks, she had been taking two teaspoonfuls of the salt a day. The epileptic attacks ceased, but the patient began to grow weak and irritable, was unable to sleep, had vertigo, difficulty of vision and slowness of speech, and lost her memory. There were salivation, foul breath, and an eruption of acne on the face and over the entire body. The author calculated that the girl had taken over three pounds of the drug in the course of a year. She was admitted to hospital, but no improvement followed; she became delirious, and finally died. Just before death, signs of a commencing pneumonia at the base of the right lung were discovered; but, while this perhaps hastened the fatal termination, death was inevitable, and was evidently attributable to bromism.

While chronic bromism is not rare, it has seldom been the cause of death.—*Druggists Circular.*

THE ARCHIVES OF PEDIATRICS, edited by William Perry Watson, M.D., a monthly journal devoted to the diseases of infants and children, is now published by the J. B. Lippincott Company. The same general plan followed in the editorial department in the past will be continued,—viz.: I. Original Communications. To this department contributions have been promised by all the prominent teachers and writers on pediatrics in this country and in Europe. II. Current Literature. In this department it is intended to present from month to month a brief practical *résumé* of all the current pediatrical literature of the world,—information that it would be impossible for the busy practitioner to obtain without great cost and an immense loss of time. Drs. And. F. Currier and L. E. Holt, of New York, and Dr. John Van Vorst, Jr., of Jersey City, will continue their connection as collaborators. Subscription price, three dollars per annum. Address of editor, 319 York Street, Jersey City, New Jersey.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.—All who propose to read papers before this Society at its next session, to be held in Bedford, June 29, should *at once* send title and a brief abstract of the same to Dr. S. H. Gump, Chairman of Committee of Arrangements, Bedford.

WM. B. ATKINSON,
Permanent Secretary.

AT the annual examination of the students of the Philadelphia School of Anatomy, the "Henry C. Boenning Gold Medal," for proficiency in anatomy, was awarded to Mr. Manley F. Gates, of Elmira, New York, attending the Medico-Chirurgical College.

PROF. HUNTER MCGUIRE, of Richmond, Virginia, will deliver the annual oration—subject, "The Progress and Development of Medical Science"—before the Alumni Association of the Jefferson Medical College on Monday evening, April 4, 1887. A reception will be held after the lecture.

PROFESSOR JOHANN RUDOLPH RANKE, of the University of Groningen, recently died from the remote effects of blood-poisoning, contracted eighteen months ago.

DR. S. SOLIS-COHEN has removed to 219 South Seventeenth Street, Philadelphia.

NOTES AND QUERIES.

OBITUARY.

WILLIAM S. LITTLE, M.D., of Philadelphia, died at Aiken, South Carolina, February 17, in the thirty-ninth year of his age. He had achieved considerable reputation as an ophthalmologist, and was a member of the American Ophthalmological Society and other societies. He was a graduate of Princeton, and of Bellevue Hospital Medical College, and later of the Jefferson Medical College, in which for the last ten years he served as chief assistant to the Eye-Clinic. He had also studied his specialty in Europe. In spite of failing health, he devoted himself assiduously to his practice, and was a valued contributor to the medical journals. For many years he had been ophthalmic surgeon to the Church Home at Angora, in which he was greatly interested. He leaves a wife, the daughter of Dr. Ellwood Wilson, and five children.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM FEBRUARY 27, 1887, TO MARCH 12, 1887.

MAJOR C. H. ALDEN, SURGEON.—Ordered for duty at U.S. Military Academy, West Point, New York, August 28, 1887, relieving Lieutenant-Colonel Andrew K. Smith, Surgeon, who will then report by letter to the Surgeon-General. S. O. 52, A. G. O., March 5, 1887.

MAJOR CHARLES R. GREENLEAF, SURGEON.—Ordered for duty in the office of the Surgeon-General of the Army. S. O. 41, A. G. O., February 18, 1887.

MAJOR D. L. HUNTINGTON, SURGEON.—Will be relieved from duty in the office of the Surgeon-General, to take effect March 1, 1887. S. O. 41, A. G. O., February 18, 1887.

MAJOR DAVID L. HUNTINGTON, SURGEON.—Ordered for duty at San Diego Barracks, California, and granted leave of absence for one month from March 1, 1887. S. O. 45, A. G. O., February 25, 1887.

CAPTAIN ROBERT H. WHITE, ASSISTANT-SURGEON.—On being relieved by Major Huntington, to proceed to Angel Island, California, and report to commanding officer for duty at that post. S. O. 45, A. G. O., February 25, 1887.

CAPTAIN WILLIAM F. CARTER, ASSISTANT-SURGEON.—Granted leave of absence for one month on surgeon's certificate of disability. S. O. 25, Department of Texas, February 24, 1887.

CAPTAIN GEORGE MCCREERY, ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 52, A. G. O., March 5, 1887.

CAPTAIN WILLIAM W. GRAY, ASSISTANT-SURGEON.—Leave of absence for seven days is extended twenty-three days. S. O. 13, Department of Dakota, February 21, 1887.

CAPTAIN R W. JOHNSON, ASSISTANT-SURGEON.—Ordered for temporary duty at U.S. Military Academy, West Point, New York. S. O. 51, A. G. O., March 4, 1887.

FIRST-LIEUTENANT GUY L. FDIE, ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect about March 1, 1887. S. O. 27, Department of Texas, February 28, 1887.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FOR THE WEEK ENDING MARCH 12, 1887.

SURGEON GEORGE B. BRADLEY.—Detached from Naval Hospital, Philadelphia, Pennsylvania, and granted six months' leave.

PASSED ASSISTANT-SURGEON JOHN W. STRELE.—Ordered to Naval Hospital, Philadelphia, Pennsylvania, without delay.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U.S. MARINE HOSPITAL SERVICE FOR THE SIX WEEKS ENDED MARCH 12, 1887.

GUITÉRAS, JOHN, PASSED ASSISTANT-SURGEON.—Granted leave of absence for twenty-one days, February 28, 1887.

PETTUS, W. J., ASSISTANT-SURGEON.—To proceed to Charleston, South Carolina, for temporary duty, February 28, 1887.

BANKS, C. E., PASSED ASSISTANT-SURGEON.—To proceed to Chicago, Illinois, and assume temporary charge of the Service, March 10, 1887.